GOVERNMENT OF ANDHRA PRADESH
DEPARTMENT OF MINES & GEOLOGY

From
V. Nagini, M.Sc., B.Ed.,
Deputy Director of Mines & Geology (FAC),
KURNOOL.

To
Sri G. Maddilety Reddy,
H.No: 2-41, Fort Area,
Banaganapalle (V&M),
Kurnool District - 518124.

Letter No.1896/MP-BPL/2021, Dated: 23-10-2021

Sir,

Sub:- Mines and Quarries – Approval of Mining Plan (including Progressive Mine Closure Plan) for Road Metal over an extent of 2.960 Hectares in Compartment No.313 of Gulamaliabad South R.F., Kurnool Division, Bhanumukkala Village, Banaganapalle Mandal, Kurnool District in favour of **Sri G. Maddilety Reddy**, prepared by **Sri G.Eswar Reddy, R.Q.P. - Mining Plan - Approved** – Regarding.

Ref:-
1) G.O.Ms.No: 56, Ind. & Comm. (M.II) Dept., dated: 30.04.2016.
2) Prodgs.No: 28594/P.RQP/2001, dt: 13.05.2016 of the Director of Mines and Geology, Hyderabad.
3) Circular Memo No.25019/P-Misc/2015, dt: 08.09.2020 of the Director of Mines and Geology, Ibrahimpatnam.
4) Circular Memo No.3861432/P/2020, dt: 16.07.2021 of the Director of Mines and Geology, Ibrahimpatnam.
5) Letter No.Ref.no.EFS02-15029/11/2020-FCA SEC-PCCF/FCA-1, dt.09.08.2021 of the Prl. Chief Conservator of Forests & Head of Forest Force, Andhra Pradesh, Guntur.
6) Letter dated: 31.08.2021, alongwith draft Mining Plan from the applicant received in this office on 31.08.2021.
7) This office Letter No.1896/MP-BPL/2021, dt: 14.09.2021 addressed to the applicant / RQP.
8) Letter dated: 18.10.2021, along with five sets of fair copies of mining plan from the applicant received in this office on 20.10.2021.

* * * *

In exercise of the powers conferred as per amended Rule 7 A (I), (II), (III) and (IV) of APMMC Rules, 1966 read with G.O.Ms.No: 56, Ind. & Comm. (M.II) Dept., dated.30.04.2016, Proceedings No: 28594/P.RQP/2001, dt: 13.05.2016 and Circular Memo No.25019/P-Misc/2015, dt: 08.09.2020 of the Director of Mines and Geology, GoAP, ***I hereby approve the*** **Mining Plan (including Progressive Mine Closure Plan) for Road Metal over an extent of 2.960 Hectares in Compartment No.313 of Gulamaliabad South R.F., Kurnool Division, Bhanumukkala Village, Banaganapalle Mandal, Kurnool District in favour of Sri G. Maddilety Reddy.** This approval is subject to the following conditions.

1. This Mining Plan (including Progressive Mine Closure Plan) is approved without prejudice to any other laws applicable to the mine area from time to time whether made by the Central Government, State Government or any other authority.

2. It is clarified that this approval of the Mining Plan (including Progressive Mine Closure Plan) does not in any way imply the approval of the Government in terms of any other provisions of the Mines and Minerals (Development and Regulation) Amendment Act, 2015 and any other laws including the Forest Conservation Act, 1980 and APMMC Rules, 1966.

3. The approval authority does not owe responsibility with regard to recovery factor of **Road Metal** and assessment of reserves, any erroneous certification made by the R.Q.P. if any, since the evaluation is done on random basis.

4. The Mining Plan (including Progressive Mine Closure Plan) is approved subject to strictly adhering to the relevant Regulations of MMR, 1961 and obtaining prior permission from the Director General Mines Safety whenever and wherever it is required.

5. The applicant/ lessee shall safeguard the structures, public buildings, roads, railway line, electric line and water bodies exists if any as per regulations 109 & 127 of MMR, 1961.

Contd...2

6. The approval of Mining Plan (including Progressive Mine Closure Plan) shall be subjected to vacation of prohibitory orders or notices or determination orders etc., if any issued by the competent authority.

7. If anything is found to be concealed as required by the Mines Act in the contents of the approved Mining Plan and the proposal for rectification has not been made or if at later stage the information furnished in the document to be incorrect or misrepresentation of facts, the approval shall be revoked with immediate effect.

8. This Mining Plan was approved as per the quarry lease executive sketch of the subject area. Any deviation found later, approval authority does not owe responsibility.

9. The approval authority does not owe responsibility with regard to erroneous certification made by the R.Q.P if any and approval is tentative subject to modification of new findings at a later date as per the provisions of Rules inforce, since the evaluation is done on random basis.

Yours faithfully,

Encl: (2 copies of A.M.P.)

Deputy Director of Mines & Geology (FAC),
Kurnool.

Copy submitted to the Director of Mines & Geology, Ibrahimpatnam along with A.M.P.

Copy to Sri G.Eswar Reddy, RQP, Door No.13-2-155-1, Shirdi Nagar, Anantapuramu-5151001 for information.

Copy submitted to the Regional Controller of Mines, IBM, Kavadiguda, Secunderabad for favour of information.

Copy submitted to the Director of Mines Safety, Bellary for favour of information.

Copy to the Asst. Director of Mines & Geology, ~~Kurnool~~ Banaganapalli along with A.M.P with a request to obtain valid Bank Guarantee (Financial Assurance) from the applicant.

MINING PLAN & PROGRESSIVE MINE CLOSURE PLAN FOR ROAD METAL

OVER AN EXTENT OF 2.960 Hects. IN COMPARTMENT. NO. 313 OF GULAMALAIABAD SOUTH RF, KURNOOL DIVISION, BHANUMUKKALA (V), BANAGANAPALLE (M), KURNOOL DISTRICT, ANDHRA PRADESH STATE.

OTHER THAN FULLY MECHANIZED OPEN CAST QUARRY 'B' CATEGORY

FOREST LAND

(Under Rule 7(A) of A.P.M.M.C.R., 1966)
AS PER FORM-T OF G.O.MS.NO.56, DT: 30.04.2016.

FOR

Sri.G.Maddilety Reddy,
H.No: 2-41, Fort Area,
Banaganapalle -518124,
Kurnool District.
Andhra Pradesh State.
Pin Code of Lease applied Area: 518124.
E-mail:gmrstonecrushers9009@gmail.com
Contact No.9494910000.

APPROVED

Prepared by

G.ESWAR REDDY M.Sc., B L.,
RQP/Geologist,
RQP/DMG/AP/07/2014,
RQP/HYD/302/2013/A'
D.No.13-2-155-1,
Shirdi Nagar,
ANANTAPURAMU A.P. 515001.
Mobile: 09849132789.Phone No: 08554 222737.
Email:eswarreddygeologist@gmail.com
saigeoservices@gmail.com

OCTOBER- 2021

DECLARATION

This mining plan for quarry lease area for Road Metal over an extent of 2.960 Hects. in Compartment. No.313 of Gulamalaiabad South RF, Kurnool Division, Bhanumukkala Village, Banaganapalle Mandal, Kurnool District, Andhra Pradesh State, prepared in consultation with me and I understand its contents and agreed to implement the same in accordance of APMMC Rule 1966.

Place : KURNOOL.
Date : 16-10-2021.

Applicant
(Sri.G.Maddilety Reddy)

CERTIFICATE

This is to certify that Mining Plan in respect of quarry lease area for Road Metal over an extent of 2.960 Hects. In Compartment. No. 313 of Gulamalaiabad South RF, Kurnool Division, Bhanumukkala Village, Banaganapalle Mandal, Kurnool District, Andhra Pradesh State, prepared by Dr G.Eswar Reddy, Consultant Geologist & RQP from **M/s. SAI GEO SERVICES** , office at Anantapuramu. The applicant agrees to follow the same in accordance to the provisions of law.

Place : KURNOOL.
Date : 16-10-2021.

Applicant
(Sri.G.Maddilety Reddy)

CERTIFICATE

The provisions of APMMC Rule 28 observed in preparation of Mining Plan for quarry lease area for Road Metal over an extent of 2.960 Hects. in Compartment. No. 313 of Gulamalaiabad South RF, Kurnool Division, Bhanumukkala Village, Banaganapalle Mandal, Kurnool District, Andhra Pradesh State.

Wherever specific permissions are required the Lessee will approach the concerned authorities.

Certified that the information provided in the mining plan is correct to the best of my knowledge.

Date : 16-10-2021.

Place: Anantapuramu.

SIGNATURE OF THE RQP

(G.ESWAR REDDY)

G. ESWAR REDDY, M.Sc.,B.L.,Ph.D.,
Recognised Geologist
IBM/RQ/HYD/302/2013/A
RQP/DMC/AP/07/2014

INDEX

LIST OF PLATES

LIST OF ANNEXURES

MINING PLAN & PROGRESSIVE MINE CLOSURE PLAN FOR ROAD METAL OVER AN EXTENT OF 2.960 Hect. LOCATED IN COMPARTMENT. NO. 313, OF GULAMALAIABAD SOUTH RF, KURNOOL DIVISION BHANUMUKKALA VILLAGE, BANAGANAPALLE MANDAL, KURNOOL DISTRICT, ANDHRA PRADESH STATE.

Introduction

Sri.G.Maddilety Reddy has filed an application for grant of Quarry Lease for **Road Metal** over an extent of 2.960 hectares in Compartment. No.313 of Gulamalaiabad South RF, Kurnool Division, Bhanumukkala village, Banaganapalle Mandal, Kurnool District in the office of ADM&G, Banaganapalle on 23.12.2017. Annexure-III.

The Asst. Director of Mines & Geology, Banaganapalle has submitted proposals to the Director of Mines and Geology, Ibrahimpatnam duly recommending for grant of quarry lease for **Road Metal** over an extent of 2.960 hectares in Compartment. No.313 of Gulamalaiabad South RF, Kurnool Division Bhanumukkala village, Banaganapalle Mandal, Kurnool District for a period of 10 years in favour of **Sri.G.Maddilety Reddy,** subject to satisfaction Forest Department clearance as per A.P.M.M.C. Rules, 1966 and subsequent Govt. Instructions issued from time to time.

The Director of Mines & Geology, Ibrahimpatnam after careful examination of the proposals of the Asst. Director of Mines & Geology, Banaganapalle it is decided in principle to grant of Quarry Lease for **Road Metal** over an extent of 2.960 hectares in Compartment. No. 313 of Gulamalaiabad South RF, Kurnool Division, Bhanumukkala village, Banaganapalle Mandal, Kurnool District for a period of 10 years in favour of **Sri.G.Maddilety Reddy,.** Vide Lr: No. 981789/R4-2/2017, dated: 19-03-2018 to get the Forest clearance from PCCF & HoFF, A.P. Guntur.

The PCCF & HoFF A.P. Guntur requested to furnish additional information of other mining leases for particular mineral with their capacity and average annual production and projected future requirements in the state of Andhra Pradesh in respect of subject proposal for further processing of the proposal.

The Mining Plan is Approved subject to the Conditions/Stipulations indicated in the Mining Plan Approval Letter No. 1896/MP-BPL/2021 Dated 23/10/2021

Deputy Director of Mines & Geology, KURNOOL

5

It is also requested to refer the minutes of meeting held on 08-07-2021 on communicated by IRO, Vijayawada in the letter MoEF & CC, IRO, Vijayawada F.No. 4-APCO92-2018-CHN/46 dated, 29-07-2021. It was decided to furnish Approved Mining Plan at the initial Stage of the proposal itself i.e., before Stage-I approval.

The authenticated DGPS surveyed Sketch of the proposed forest area with Geo-Coordinates duly indicated land use plan for mining, safety zone, approach road in respect of the subject proposal is sent herewith. Necessary instructions are being issued to the User Agency to furnish draft mining plan based on the above precise area arrived after conducting DGPS survey to the Director of Mines and Geology, A.P., Ibrahimpatnam for necessary action. The Director of Mines and Geology, A.P., Ibrahimpatnam/ the representative authorized by him, may approach the Divisional Forest Officer, Kurnool for entry in to forest and inspect the precise forest area proposed for mining purpose vide letter Ref. No. EFSO2-15029/11/2020-FCA SEC-PCCF/FCA-1, Dt:09-08-2021 as per APFD-F (C) Act, 1980- Diversion of forest land over an extent of 2.960 ha. in Compartment No.313, Gulamaliabad South Reserve Forest, Dhone Range, Kurnool Division & District in favour of **Sri.G.Maddilety Reddy for grant of quarry lease for Road Metal**. **Annexure-II**.

Hence it is requested to take necessary action to furnish the Approved Mining Plan by getting draft Mining Plan from the User Agency for the precise forest area arrived after DGPS survey to the Director of Mines & Geology, Ibrahimpatnam.

Sri.G.Maddilety Reddy, approached **Sri.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.

6

I GENERAL

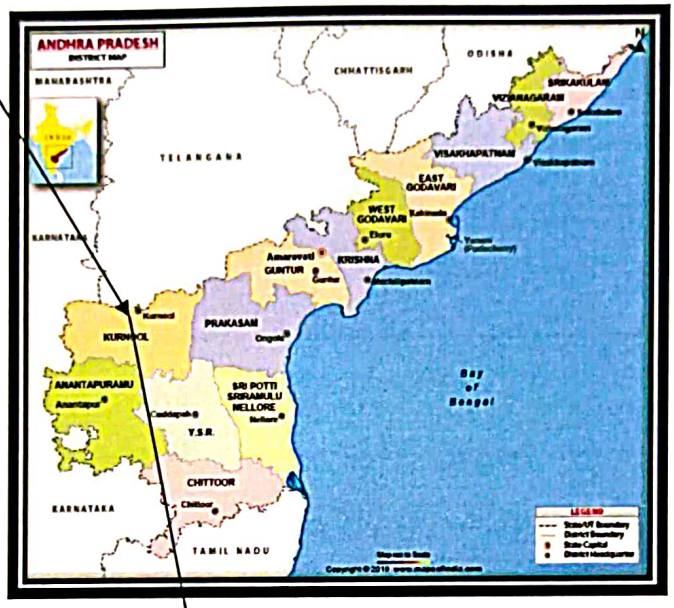
1.1	**Name and Address of the Lessee**	Sri.G.Maddilety Reddy, H.No: 2-41, Fort Area, Banaganapalle -518124, Kurnool District. Andhra Pradesh State. Pin Code of Lease applied Area: 518124. E-mail: gmrstonecrushers9009@gmail.com Contact No.9494910000
1.2	**Status of the Lessee (Individual/ Private Company/ Firm)**	**Individual**
1.3	**Mineral (s) which are included in the Letter of Intent**	ROAD METAL
1.4	**Name and Details of person employed for preparing Mining Plan**	**G.ESWAR REDDY M.Sc., B L., RQP/Geologist,** RQP/DMG/AP/07/2014, RQP/HYD/302/2013/A, D.No.13-2-155-1, Shirdi Nagar, ANANTAPURAMU. A.P. 515001. Mobile: 09849132789. Phone No: 08554 222737.
1.5	**E-Mail & Website**	Email: eswarreddygeologist@gmail.com
1.6	**RQP Registration No. & Validity**	RQP/DMG/AP/07/2014 & Valid Up to Dec-2024

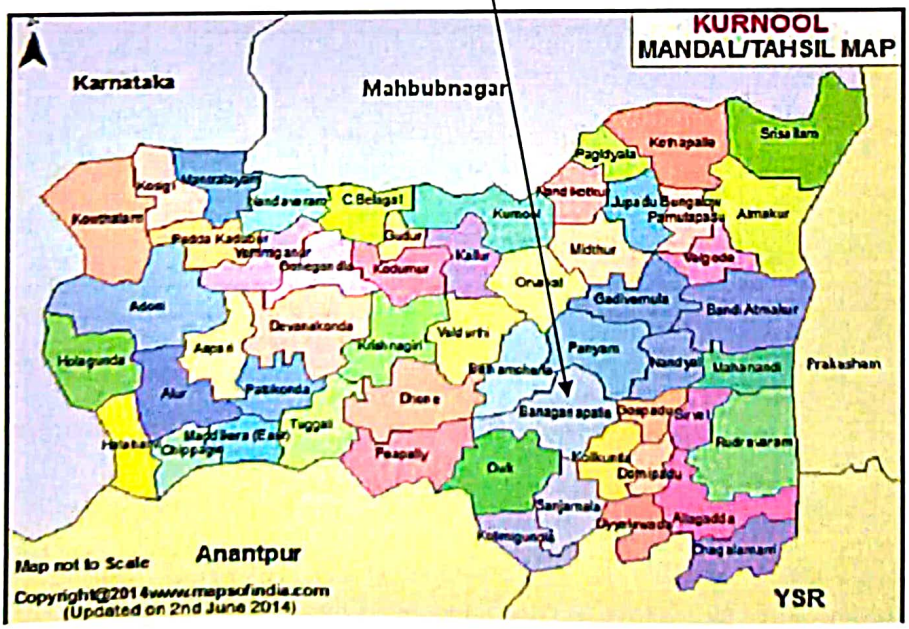
II. LOCATION AND ACCESSIBILITY:

1. Toposheet No. with latitude and longitude of all corner boundary pillars: The Quarry lease area falls on SOI Toposheet No.57 I/ 03 Scale 1: 50,000) and the Geo Co-ordinates of the boundary pillars are tabulated below:

Table - DGPS READINGS OF BOUNDARY POINTS

GEO COORDINATES – MAP DATUM WGS - 84		
DMS(degrees, minutes, seconds)		
POINT	**N-Latitude**	**E-Longitude**
M1	15^0 18′ 49.57489″	78^0 11′ 16.04237″
M2	15^0 18′ 50.29566″	78^0 11′ 17.69689″
M3	15^0 18′ 50.92491″	78^0 11′ 19.13538″
M4	15^0 18′ 51.26122″	78^0 11′ 20.60115″
M5	15^0 18′ 51.63359″	78^0 11′ 22.24342″
M6	15^0 18′ 52.01235″	78^0 11′ 23.89321″
M-6A	15^0 18′ 52.09771″	78^0 11′ 24.46103″
M7	15^0 18′ 50.84812″	78^0 11′ 24.64752″
M8	15^0 18′ 49.55179″	78^0 11′ 24.84367″
M-8A	15^0 18′ 48.07875″	78^0 11′ 25.05962″
M11	15^0 18′ 47.17661″	78^0 11′ 21.47878″
M12	15^0 18′ 46.47984″	78^0 11′ 21.61769″
M16	15^0 18′ 48.24281″	78^0 11′ 15.72076″





2. Attach a general location map showing area and access routes:

The QL area is located at 4.5 km towards South West of Banaganapalli village and 1.5km towards South East of Yagantipalli village. Cart road is having from the Yagantipalli village. The Yagantipalli village is on road side which is connecting Kurnool to Banaganapalli Road. The QL applied area can be approached from Kurnool to Banaganapalli Road before 4.50 km from Banaganapalli Mandal Yagantipalli village take right diversion towards South of the Road 1.5 km QL applied area is reached. The Q L applied area has good accessibility to the National Highway of NH-18 Kurnool to Chennai at 35.0Kms connecting at Nandyal cross. Water is available at the nearby site in Agricultural Bore Well from Q.L. applied area. Power connections are available up to Yagantipallii (V) Banaganapalli Mandal, Kurnool Dist. Tele communication facility is available at Banaganapalli(V), which is at a distance of about 4.50 km all cell networks can function in the site area.

The nearest railway station is at Banaganapalli which is about 4.5Km. Nearest Port facilities are at Chennai, Krishnapatnam, and Mangalore. High school is present in the Banaganapalli village, Degree level Educational facilities exist at Banaganipalli. Hospital facility (PHC) is available at Banaganapalli which is 5.0 km. from the quarry site.

The details of the area are tabulated below:

***Map Datum: WGS-84**

State	District	Mandal	Village	Compartment. No.	Extent in hects.	Status of occupancy	Pin Code
Andhra Pradesh	Kurnool	Banaganapalle	Bhanumukkala	313	2.960	Forest land (barren)	518124

The Sketch Approved By the **ADM&G, Banaganipalli & DDMG, Kurnool**, in favor of **Sri.G.Maddilety Reddy.** Is Given As **Plate No. II**.

2.1 Period of quarry lease required = 10 years

2.2 Infrastructure and Communication

Availability of Water	Water is available at near the Quarry site Bore Well fitted with Submersible Pump, Power connections are available near to QL applied area.
Availability of Electricity	Power connections are available up to Bhanumukkala village. The company will draw power lines from the village.
Communication Network	Tele communication facility is available at Bhanumukkala which is at a distance of about 1.0 km and all networks can function in the site area.
Road Network	The QL applied area has got good accessibility to the Banaganapalle - Nandyal Road crossing at about 2.5km at Banaganapalle.
Nearest Rail Head	The nearest railway station is at Banaganapalle which is about 4.5 km.
Port Facility	Nearest Port facilities are at Chennai-528km, Krishnapatnam-416km, Mangalore-600km and Tuticoreine-948 km.
School	High school is present in the Bhanumukkala village, Degree level Educational facilities exist at Banaganapalle.
Medical Facility	Hospital facility is available at Banaganapalle which is 4.5 km. from the quarry.
Forest Boundary	The applied area is situate at a distance of 100 mts from forest boundary.
Airport	The nearest Airport is at Orvakal which is about 35.0 km

Boundaries

North: Quarry Lease Area Sri.D.Siva Sankar Reddy,
M/s Bargav Stone Crusher Unit & Smt.Sivamma.

South: M/s GMR Stone Crusher & Compt No.313,Bhanumukkala village.

East: M/s Sainath Stone Crusher & & Compt No.313, Bhanumukkala village.

West: M/s Sainath Stone Crusher & Compt No.313, Bhanumukkala village.

Further good potential exists for the employment of unskilled labour in the existing Quarries and allied Small-Scale Industries. The area experiences Tropical Climatic Conditions, General Monsoons are SW & NE with an average annual normal rainfall of 502.3 mm and 553.8 is in the year of 2010-11. The local day temperature varies from 22.0°C (Minimum in winter) to 43.0°C (Maximum in summer) in the Month. Total Population of this Yagantipalli & Bhanumukkala Village is around 1040 & 1524 (Source: Census of India – 2011).

10

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

No Mining plan was approved earlier. The Present document is for assessment of the quarry activity, Reserve Estimation, Proposed Method of Mining, Environment Management Plan including Reclamation and Rehabilitation measures to be adopted. The Lessee will approach ADMG for necessary Permissions to Start Quarry Operations.

PART – A

1. General details of the area:

Physiography / Topography:

Topographically the QL applied area is a Hillock gently slopes towards South directions. Generally it is hill with an average altitude of 305m to 340m above M.S.L. and dendritic to sub dendritic drainage is observed. The area is elevated towards North of the QL applied area and sloping towards South directions. The area is belonging to Forest. It comprises big size Boulders and shrubs only. The subject area covers the part of the Pediment comprising negligible OB 9m depth along the depressions of the big size Boulders exposed over the subject area. The drainage pattern is dendritic to sub-dendritic. The applied area belongs to Be long forest land 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 568.7 mm and 313.3 mm in the year 2014-15.

2. GEOLOGY AND EXPLORATION:

2.0 Regional Geology

Stratigraphy of the area

Geological succession of the area (after Saha and Ttripathy, GSI, 2012)

	Nandyal Shale Koilkunta Limestone Paniam Group
KURNOOL GROUP	**Owk Shale**
	Narji Limestone
	Banganapalli quartzite

A 500m thick succession of Quartzite, Sand stone, Clay & Limestone unconformably overlies the Cuddapah sediments in Kurnool and Palnad Basin. The Kurnool sub basin is in the West Central part of the Cuddapah Basin lies between the Northern Srisailam sub Basin and Southern Papagni sub Basin.

Formation	Lithology	Thickness in mts
Nandyala Clay	Clay	50-100
Koilakuntla Limestone	Limestone	15-50
Panyam Quartzite	Quartzite	10-35
Owk Clays	Clay	10-15
Narji Limestone	Limestone	100-200
Owk Quartzite	Conglomerate Quartzite	10-50

Owk Quartzite forms the basal part of the Kurnool group overlies the Cuddapah group with unconformity. It consists of Dark Red, Grey or Brown Sand stone, which is course grained and gritty with an impersistant Zone of Conglomerate.

The above sequence has not been revised; expect that the Pinnacled and Panyam Quartzites are clubbed together as Panyam Quartzite.

The Narji Lime stones are well developed and have extensive distribution. It starts as highly siliceous limestone with Pink Colour and thin lenticular lenses of gritty, ferruginous sand stone at some places. The middle portion is a Bluish grey high grade limestone, massive and thinly bedded.

The Owk Clay overlying the Narji Limestone, buff white and purple colored Clay. Panyam Quartzite overlying the Owk Clay is overlain by ferruginous, occasionally Conglomerate Panyam Quartzite. These Quartzites are forming typical highly jointed inselberg type out crop with vast and extensive exposure of low level with gentle dips.

The Panyam Quartzites and Koilkuntla Lime Stone are siliceous and flaggy with intercalated good quality of Quartzites & weathered Nandyal clay. In this Thammarajupalli area Dolorite sills are intruded between Quartzites and Limestone beds. This Dolorite Sills which are highly fractured also used for Road Metal in Panyam area.

Nandyal Clay is uppermost litho unit of Kurnool group, which is purple in Colour with earthy Clay intercalations, salty cleavage and presence of puckers at the contact of Nandyal Clay with other formation indicating the effect of mild deformation.

2.1 Geology of the Lease area

Geologically the applied area occupied by Sedimentary rocks of Koilkuntla Limestone (Flaggy) of Panyam Series of Kurnool group of Kadapa Basin. Major litho unit exposed in the QL area is Limestone (Flaggy) with track follows beds of Dolarite sills. At the time of inspection lithological sequence observed in the nearby existing quarry leased areas on quarry face are 0-2.00 Mts Soil Cover, 2.0 - 9.0 Mts Weathered Flaggy Limestone and 10.0-40.0 Mts., Dolorite Sills which are useful for Road Metal. These Siliceous Limestone beds are black in colour jointed with irregular intervals. These beds are gently dipping towards NE direction. Because of this phenomenon it is easy to extract them into Road Metal of different sizes. These Road Metal can be used in buildings as Roof flooring and Road laying purpose. Some of the entrepreneurs in Panyam are also using this material to the various constructions and NH-18 Road.

Topsoil: Black cotton soils are covering the Road Metal on Top of the QL applied area with thickness of about 1.5.m and OB up to 9.0 mts which can be used as Gravel.

b) i) <u>Geological Plan:</u> Mining lease area was demarcated on the ground with reference to revenue pillars. Later the topographical survey of the area was carried out by theodalite. Based on topographical survey and geological features, collected from the surface, the surface geological plan was prepared on 1:1500 scales with 5.0m contour interval and enclosed as plate-3.

c) Details of the Applicant:

Sri.G.Maddilety Reddy,
H.No: 2-41, Fort Area,
Banaganapalle -518124,
Kurnool District.
Andhra Pradesh State.
Pin Code of Lease applied Area: 518124.
E-mail:gmrstonecrushers9009@gmail.com
Contact No.9494910000.

d) Details of the Prospecting carried out:

Not applicable to Road Metal Quarries.

e) Surface Plan area on scales: The surface cum Geological Plan and Cross Sections of the Q.L. Applied Area is prepared on 1:1500 & 1:1500 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.

13

h) Future Program of Exploration program me planned in next five years:

As this Quarry Lease is being granted for Road Metal for the purpose to use as for constructions & Road Works & Supply for Crusher.

J) Broadly indicate the future problem of exploration with due justification taking into consideration the future tentative excavation program planned in next five years.

Table

Year	No.of boreholes (core/RC/DTH)	Grid interval	Total Meter age	No. of Pits, dimensions and volume	No. of trenches, dimensions volume
I	----	----	----	----	----
II	----	----	----	----	----
III	----	----	----	----	----
IV	----	----	----	----	----
V	----	----	----	----	----

i) Reserves and Resources as per UNFC :

i) Type of Deposit as per UNFC Guidelines

Road Metal is not falling 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 as locally.

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

As the ROM is intended for use in the Road Metal 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 25 to 30 m on either side of the lease applied area. The Bulk Density was considered at 2.5.

iii) Status of exploration: G1

14

GEOLOGICAL AXIS:

1. Geological Survey:

i) Mapping: Detailed geological survey was carried out in the area on 1:1500 scales with 5.0 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 1:1500 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- 4.**

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

3. **Geophysical survey:** Not carried out because sheet rock of Granite is exposed 9 mts below the surface in adjacent Narran so that we have not underfed geophysical survey.

4. **Technological survey:** Not applicable.

- Detailed topographical and geological survey was carried out on 1:1500 scale showing all the surface features, contours at 5.0 m interval, the lease boundary, surface Geology & Structural features.
- The entire thickness of Road Metal found to be more than 30m which was correlated from the bore hole inventory data in the adjacent lands and adjacent quarry.
- Reserves are estimated by cross sectional 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 will be exploited through opencast other than fully mechanized mining methods with drilling & Blasting. ROM will be directly consumed by the Lessee for sale by the applicant for nearest crushing plants and intended for the highways Project from Kurnool to Bangalore.

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 Proposal area. On the other hand the mining operations will create livelihood to the villagers nearby. The Lessee will develop green belt around the Q.L. Applied Area as part of his commitment to environment protection.

3. Processing:

After blasting the ROM will be fed directly on to the crusher for crushing in to desired sizes of aggregates.

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

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

5. Infrastructure: The entire necessary infrastructure such as office, rest shelter, magazine, explosive van, water tankers, power connection etc., will be provided once the mining plan is approved. The Q.L. Applied Area is connected with roads to the Banaganapalle Mandal and District headquarters of Kurnool.

6. Costing: The cost of production of Road Metal works out to be Rs. 500/- per ton.

7. Marketing: Road Metal is not intended for outside sale. **It is for captive purpose for the crusher and Hot mix plant of Lessee for use in the Highways road project from Kurnool to Nandyal.**

8. Economic Viability: As the proposed quarry lease is in the near vicinity and captive use it is surely economic and viable.

16

9. Other factors: Relevant clearances shall be obtained for Staring the mining operations in the Q.L. Applied Area.

ECONOMIC AXIS:

1) Detailed explorations

Detailed topographic survey and geological mapping the Q.L. Applied Area was subjected to detailed exploration by field traverses and well inventory data. The depth of sheet rock is assessed by the lithology observed in the adjacent 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 Q.L. Applied Area is covered by Compartment No.313 of Gulamalalabad South Reserve Forest, Kurnool Division 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 is arrived at Rs.500/- per ton inclusive of taxes and royalty. The entire ROM is for sale purpose as such it is surely economic and profit oriented.

(k) MINERAL RESERVES

(i) Mode of Mining, recovery Factor, Mining Losses, Processing Losses etc., Road Metal will be mining by open cast other than fully mechanized method with drilling and blasting. The recovery factor is considered as 95% Road Metal, & 5% waste as interstitial voids and fractures because it is exposed with sheet rock. There will not be any mining losses except 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 310m at the North and 335m in South portion of the Q.L. Applied Area during the First to 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 lithology 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 27m to 30 m on an average i.e. 30.0 m on either side of the Cross section. The occurrence of the dolerite still is more than 30.0 m BGL. Based on the field traverses and correlated data from the boreholes in the adjacent agricultural lands to a depth of 100.0m, 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-2

Category	SECTIONS	Sectional Area	Deposit Height in m	Volume m^3	PRODUCTION			
					RESERVES OF AGGREGATE @ 95% IN m^3	RESERVES OF AGGREGATE @ 2.85/m^3 IN Tons	Rock Waste @ 5% in m^3	OB
Proved	A-A'	13240	9	119160				119160
			27	357480	339606	967877	17874	
				357480	**339606**	**967877**	**17874**	**119160**
Proved	B-B'	16360	9	147240				147240
			30	490800	466260	1328841	24540	
				490800	**466260**	**1328841**	**24540**	**147240**
Total		**29600**		**848280**	**805866**	**2296718**	**42414**	**266400**
AFTER BUFFER ZONE				**700163**	**665154**	**1895690**	**35008**	**261803**
AFTER SLOPE DEDUCTION				**480200**	**456190**	**1300140**	**24010**	**249137**

ROAD METAL

Reserves Blocked Under 7.5 M Buffer Zone=140712 m^3

Reserves Blocked Under Safety Slopes=208965 m^3

MINEABLE RESERVES

S. No.	Category of Reserves	Reserves in Cu.mts.	Reserves in tons.
1	Proved	**456190**	**1300140**
TOTAL		**456190**	**1300140**

18

Reserves of the buffer zone

Area of buffer zone x average depth x recovery factor

= 5107.5 (681 x 7.5)X 29 = 148118x 0.95=140712 m^3

Total Mine able Reserves=Total Geological Reserves - Reserves

Blocked under buffer zone i.e. = 805666-140712= 665154 m^3

Reserves Blocked under Bench Slope = 323 X 681 = 219963x0.95 = 208964 m^3

Total Mineable Reserves = 665154- 208964 = 456190 m^3

Net Mineable Reserves of Road Metal in Q L. applied area = 456190 m^3

Total Mineral waste available in Q L. applied area = 24010 m^3

Total Mineral Over Burden available in Q L. applied area = 249137 m^3

(v) Mineable Reserves and Life of the Quarry:

Initially, the total quantity of mineable reserves is considered as (economic) marketable reserves. In this way a total mineable reserves of 456190 m^3 or 1300140 tons of Road Metal is available in this Q.L. applied area. The production is proposed to obtain 24915 m^3 71007 tons per year. At this rate of production, the expected life of the quarry is calculated as given below.

(vi) Anticipated Life of the Quarry:

Mineable Reserves of RM / Average Annual production in **cbm**

= 456190/24915=**18.30 (or) 18.00 Years.**

Mineable Reserves of RM / Average Annual production in **tones**

= 1300140/71007=**18.30 (or) 18.00 Years**

3.0 MINING

(i) OPEN CAST MINING METHOD (Mining Carried out)

i) This is a new Quarry. The mining will be carried out by opencast other than fully mechanized mining method with drilling and blasting. The ROM will be sized and sorted the crusher which is going to establish south side of the quarry lease applied area and loaded on to tippers and tractors using JCB. Mining are carried out by formation of bench of height 6 mts. The details and sections are depicted on **Plate-5**.

(ii) Year wise tentative excavation in Cubic Meters indicating development, ROM, Pit wise: About 12925m^2 of excavation out of which intended ROM 131130m^3 of Road Metal will be mined by forming two benches of 6.0 m each one bench of 9.0m for OB. The year wise details are tabulated below:

Table-3

Year	Working areas m^2	Bench height m	Volume m^3	PRODUCTION			
				RESERVES OF AGGREGATE @ 95% IN m^3	RESERVES OF AGGREGATE @ 2.85/ m^3 in Tons	Rock Waste @ 5% in m^3	OB
1st year	2585	9	23265				23265
	2316	6	13896	13201	37623	694.8	
	2055	6	12330	11714	33383	616.5	
			26226	**24915**	**71007**	**1311**	**23265**
2nd year	2585	9	23265				23265
	2316	6	13896	13201	37623	695	
	2055	6	12330	11714	33383	617	
			26226	**24915**	**71007**	**1311**	**23265**
3rd year	2585	9	23265				23265
	2316	6	13896	13201	37623	695	
	2055	6	12330	11714	33383	617	
			26226	**24915**	**71007**	**1311**	**23265**
4th year	2585	9	23265				23265
	2316	6	13896	13201	37623	695	
	2055	6	12330	11714	33383	617	
			26226	**24915**	**71007**	**1311**	**23265**
5th year	2585	9	23265				23265
	2316	6	13896	13201	37623	695	
	2055	6	12330	11714	33383	617	
	12925		**26226**	**24915**	**71007**	**1311**	**23265**
GRAND TOTAL			**131130**	**124574**	**355034**	**6557**	**116325**
AVERAGE TOTAL			**26226**	**24915**	**71007**	**1311**	**23265**

1st year : During first year operations it is proposed to develop the South side by covering the face into two benches of 6m height each for Road metal and one bench of 9m for OB. The workings will be carried out over an area of 2585m^2 for OB & 2316m^2 for Road metal RL 303m to 285m. The benches will be oriented in EW direction and obtained about 24915 m^3 or 71007 tones of **Road metal**, 1311 m^3 of mineral waste and 23265 m^3 **OB** in this year.

2nd year: During second year operations it is proposed to develop the North side by covering the face into two benches of 6.0 m height each for Road metal and one bench of 9m for OB. The workings will be carried out over an area of 2585m^2 & 2316m^2 RL 312m to 294m. The benches will be oriented in EW

direction and obtained about 24915m^3 or 71007 tones of **Road metal**, 1311m^3 of mineral waste and 23265m^3 **OB** in this year.

3rd year : During third year operations it is proposed to develop the North side by covering the face into two benches of 6m height each for Road metal and one bench of 9m for OB. The workings will be carried out over an area of 2585m^2 & 2316m^2 RL 316m to 298m. The benches will be oriented in EW direction and obtained about 24915m^3 or 71007 tones of **Road metal**, 1311m^3 of mineral waste and 23265m^3 **OB** in this year.

4th year : During fourth year operations it is proposed to develop the North side by covering the face into two benches of 6m height each for Road metal and one bench of 9m for OB. The workings will be carried out over an area of 2585m^2 & 2316m^2 RL 322m to 304m. The benches will be oriented in EW direction and obtained about 24915m^3 or 71007 tones of **Road metal**, 1311m^3 of mineral waste and 23265m^3 **OB** in this year.

5th year : During fifth year operations it is proposed to develop the North side by covering the face into two benches of 6m height each for Road metal and one bench of 9m for OB. The workings will be carried out over an area of 2585m^2 & 2316m^2 RL 327m to 309m. The benches will be oriented in EW direction and obtained about 24915m^3 or 71007 tones of **Road metal**, 1311m^3 of mineral waste and 23265m^3 **OB** in this year.

(iii) Dump Management: There is proposal for Dump Yard in South side of QL applied area with size of 4891 sq.mts in step dumping method up to 25m. Retaining wall and Garland Drain is proposed down side of Dump yard for the protection from rain water. Waste can be dumped in this area and also in 7.5 mts Buffer Zone.

Year Wise	Intercalated Waste&OB @5%
1st Year	1311+23265
2nd Year	1311+23265
3rd Year	1311+23265
4th Year	1311+23265
5th Year	1311+23265
Total	6555+116325

Lay out of Mine Workings, pits, roads, etc.

The Lessee intends to extract Road Metal production to the tune of ROM 131130 m^3 of Road Metal during the Mining Plan period on Plate No.

During this period, it is proposed to exploit the Road Metal from the total area of 12925m^2 to an average depth up to 21 m over the lease Proposed area from South to North RL 305 to RL 340 m as shown on **Plate 5**.

There is no problem in the quality of Road Metal which confirms to the specifications Aggregates.

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.**

1.1 Drilling and Blasting:

1.2 Drilling and blasting plays an important role for extraction Rom of Road Metal. 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 450 CFM 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 = Height of bench = 10 m L = Length of drill hole = 11 m B = Burden = 3.0 m S = Spacing = 3.5 m D = Diameter of the blast hole = 100 mm V_R = Vol., of broken Rock = B * S * L = 3.5 * 3 * 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 buildings 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 should get 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 proponent should have approved explosive magazine 1 with capacity of 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 obtain permission for ANFO mixing shed, where the ANFO is mixed.

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:

Table-5.

Details of Mining Machinery Required

Purpose	Type of machinery	Capacity & Nos.	Make Atlas capco
1. Breaking	**Crawler drill 4.5"**	**100 mm dia 450 cfm / 2 nos.**	CP
2. Loading	**Loader / Excavator**	**2 no.**	
3. Haulage	**Tippers**	**25- tonner, 6nos**	
4. Water tanker	**Tractor type 1 no**		

a) **Conceptual Mine Planning:** The worked out pit will occupy an area of 12925 m^2 or 1.2925 Hectares to a depth of 21 m reaching 310 m (FRL) at the NW portion of the quarry lease area. The area occupied by internal roads would be 0.0350 Hectares; while plantation will be occupying an area of 0.1125 Hectares on the East side of the Q.L applied area. The Conceptual plan with Sections is enclosed as **Plates 6**.

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

4.0 MINE DRAINAGE

a) The Q.L. Applied Area is over an elevated mound to a height of 90.0 m above ground level. Rain water constitutes the drainage Compartment of the area. Normal course of drainage is a sheet wash over lower reaches and flows through the seasonal nala located on South of Q.L applied 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 340 m while the minimum level of working would be 305 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) Regional and Drainage Pattering:- The entire Q.L. Applied Area is over a sloping terrain and only sheet wash is anticipated during monsoon in the Q.L applied 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 Q.L. Applied Area to a height of 2.0m.

6.0 USE OF MINERAL & MINERAL REJECTS

The ROM will be fed in to the sale by the applicant for nearest crushing plants where it will be crushed to desired sizes and utilized for the State & National Highway projects from Banaganapalli to Nandyal. Entire ROM is intended to use for crushers.

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

It is proposed to provide the site services like Mines office and other statutory constructions like rest shelter, first aid, work shed and drinking water as required in the lease area. Separate Shelter and toilets for Gents & Ladies will be provided at the Crusher area. Drinking water will be supplied to the workers from the bore well opened in the adjacent agriculture field.

Infrastructure facility	Location	Remarks
1. Roads	From the public road to the benches within and outside the lease	Kaccha road by using the waste from the mine with width of 10m
2. Office	Within the lease	Made of GI sheets with a dimension 8mx3m
3. Rest Shelter/canteen	Within the lease	Made of GI sheet with a dimension 10mx4m
4. First aid room	Within the lease	Made of GI sheet with a dimension 4mx3m

a) Employment Potential:

a. Mines Manager(Foreman)	- 1
b. Manager	- 1
c. Supervisor	- 1
d. No. of Drillers	- 6
e. Compressor Operator	- 1
f. Excavator Operator	- 1
g. Excavator Helper	- 1
h. Wire saw operator	- 1
i. Tipper Driver	- 1

b) Safety Precautions/Safety Gear to the Personnel:

. Pre-employment health checks for newly recruited employees.
. Periodical health checks for all employees.
. A well maintained unexpired first aid kit at the site.
First - aid training to supervisory personnel on site.
. Supply of sufficient fit to wear Boots, Ear Muffs/Plugs, Helmets to all the personnel and goggles for Drilling crew.
. Un-authorized personnel/trespassers will be prevented from entering The quarry.

c) Training and Safety

. The quarry personnel will be trained in their respective skills by Sponsoring them to nearest Vocational Training Centers.
. The quarrying equipment will be maintained as per the standards Prescribed under MMR 1961

Development in their respective field, from the nearest authorized 'Vocational Training Centre' periodically.

d) Amenities to the site personnel:

All amenities as per labour laws like shelter, food and other welfare facilities will be provided by the applicant..

25

PART-B

PROGRESSIVE MINE CLOSURE PLAN UNDER RULE 23 OF MCDR' 1988

1. ENVIRONMENT BASE LINE INFORMATION

a) Existing Land use Pattern: The Q.L. Applied Area is a forest land. An area of about 12925 m^2 will be broken to win the mineral. An area of 1125m^2 is proposed for a forestation. The Q.L. Applied Area is a barren land and surrounding area no forest and cultivated lands. (**Plate-7**)

S.NO.	Period	Item	Area In Sq. Mts	Area In Hects
1	Surface Plan	Mined out area	Nil	Nil
		Road	Nil	Nil
		Un mined area	24492	2.4492
		Buffer Zone	5108	0.5108
		Total Area	**29600**	**2.9600**
	End of the plan period	Mined out area	12925	1.2925
		dump yard	4891	0.4891
		Un mined area	6676	0.6676
		Buffer Zone	5108	0.5108
		Total Area	**29600**	**2.9600**
	End of the Conceptual Plan period	Mined out area	12925	1.2925
		dump yard	4891	0.2309
		Un mined area	6676	0.6676
		Buffer Zone	5108	0.5108
		Total Area	**29600**	**2.9600**

b) Human Settlements: The Q.L. Applied Area is surrounded by 4 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:

S.No.	Name of the village	Population	Distance in km	Directions
1	**Yagantipalle**	984	1.9	North
2	**Bagaganapalli**	5480	3.9	East
3	**Mirapuram**	657	3.0	NW
4	**Battalurupadu**	579	4.0	NE
5	**Patapadu**	458	3.5	NW

c) Public buildings, Places of Worship and Monuments: No buildings or places and Monuments are witnessed in the Q.L applied 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.

e) Flora and Fauna

The subject area is most of the area is covers rocky terrain and does not consists any major trees or major vegetation. Except the presence of reptiles and other minor wild life like rabbits, field rats etc., no major wild life exists in this area.

2. ENVIRONMENTAL IMPACT ASSESSMENT:

(a) Land Area Degraded: An area of about 12925 m^2 will be degraded for the working pit; and Roads 250 m^2.

(b) Air Quality: Road Metal 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 Q.L. Applied Area is quite far from the habitation area situated 1.0 Kms away from Bhanumukkala 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 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 Q.L. Applied Area to a depth of 21.0 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 40-50 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 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 Q.L. Applied 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 projects etc 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 planned in the first scheme 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.

S.NO.	Period	Item	Area In Sq. Mts	Area In Hects
1	Surface Plan	Mined out area	Nil	Nil
		Road	Nil	Nil
		Un mined area	24492	2.4492
		Buffer Zone	5108	0.5108
		Total Area	**29600**	**2.9600**
	End of the plan period	Mined out area	12925	1.2925
		dump yard	4891	0.2309
		Un mined area	6676	0.6676
		Buffer Zone	5108	0.5108
		Total Area	**29600**	**2.9600**
	End of the Conceptual Plan period	Mined out area	12925	1.2925
		dump yard	4891	0.2309
		Un mined area	6676	0.6676
		Buffer Zone	5108	0.5108
		Total Area	**29600**	**2.9600**

The land that will be broken in the successive conceptual periods (the Life of the quarry is anticipated to be 18.00 years as of present).

LAND USE

The on-going mining and the downstream activities have covered the lease hold for about 2.2924 Hectares as detailed below:

S.No	Item	In M2	In Hects.
1	Working Pit	12925	1.2925
2	Buffer Zone Area	5108	0.5108
3	Dump Yard	4891	0.4891
4	Stock Yard	----	----
5	Buildings(In Buffer Zone)	----	----
6	Ramp Area, Internal Road Ways	----	----
7	Plantation(In Buffer Zone)	----	----
8	**Total**	**22924**	**2.2924**
9	Un touched area	0.6676	0.6676
10	**Grand Total**	**29600**	**2.9600**

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 Program me:

The quarry lease area is scanty suitable for plantation as most of area is rocky. There are chances of tree growing in the East side of the quarry lease area. However it is proposed to plant a few trees in the East side of the buffer zone of quarry lease 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

Year	Year wise area in sq.mts	Year wise area in Hectares	Number of Plants	Remarks
1st Year	225	0.0225	30	50% of survival is envisaged.
2nd Year	225	0.0225	30	
3rd Year	225	0.0225	30	
4th Year	225	0.0225	30	
5th Year	225	0.0225	30	
Total	1125	0.1125	150	

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 30 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: Black cotton soils are covering the Road Metal on Top of the QL applied area with thickness of about 1.5.m and OB up to 9.0 mts which can be used as Gravel.

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 unto ward incident.

In event of any emergency the Contact person is:

Sri.G.Maddilety Reddy,

H.No: 2-41, Fort Area,

Banaganapalle -518124,

Kurnool District.

Andhra Pradesh State.

Pin Code of Lease applied Area: 518124.

E-mail:gmrstonecrushers9009@gmail.com

Contact No.9494910000.

8. Care and Maintenance during temporary discontinuance:

An emergency plan to deal with the situation of temporary discontinuance or incomplete program me 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.

9. TIME SCHEDULING FOR ABANDONMENT:

As the quarrying in the lease applied area is active proposal of abandonment is not proposed in next 5 years period.

Item	Details	Proposed	Actual	Remarks
Dump Management	----	----	----	----
Management Worked our benches	----	----	----	----
Reclamation and Rehabilitation by back filling	----	----	----	----
Rehabilitation of waste land, within lease	----	----	----	----

9.1 ABANDONMENT COSTS

FOR THE FIRST FIVE YEARS

Items	Details	Area (Ha)	Quantity	Expenditure (Rs)	Remarks
		Proposed	Proposed	Proposed	
Reclamation & Rehabilitation of mined out land	Back filling	Yes	----	N.A	Backfilling will not be done during the first five year plan period. So cost is not included.
	Afforestation & back filled Area	Nil	----	----	----
	Others (Erecting the Barbed Wire fence around the QL area)	Nil	----	N.A	----
	Pisciculture	Nil	----	----	No cost is involved for converting the quarry pit into a water Harvesting Structure/ Pisciculture tank. As the pits gets filled during rainy periods and rise in the water table if any in the area
	Converting into water reservoir	Yes	----	----	
	Picnic Spot	Nil	----	----	----
Stabilization & Rehabilitation of Dumps (within lease)	Terracing	Nil	----	----	----
	Pitching	Nil	----	----	----
	Construction of retaining wall at Toe of Dumps	Yes	141m x 3m	Rs.35250	----
	Construction of Chec k dams	Yes	----	----	----
	Construction of garland drains	Yes	147m	Rs.22050	----
	Desilting of settling ponds, channels	Yes	----	----	----
	Afforestation on dumps	N.A	----	----	----
	Others (please Specify)		----	----	----
Rehabilitation of barren area within Lease	Green Belt	0.1125 m^2	1125 m^2	Rs. 330000	
	Others (Please Specify)	----	----	----	----
Environmental Monitoring (Core zone & Buffer zone)	Ambient air quality	----	----	Rs 30,000 per per Annum) (For 5 years Rs. 1,50,000)	
	Water quality	----	----		----
	Noise Level survey	----	----		----
	Ground Vibration	----	----		----
	Others (Please Specify)	----	----		----
	Total	**0.1125**		**Rs 5,67,300**	----

10. Financial Assurance:

Financial assurance can be submitted in any en cashable from preferable a **bank guarantee** from a Scheduled Bank at the rates equivalent to rates prescribed for next 5 years period expiring at the end of validity of the document.

The proposed mining operations are by Semi Mechanized of quarrying and by shallow drilling and blasting means and hence the cost of reclamation & rehabilitation is calculated as per the provisions of GO Ms No.53 Dated: 27-02-2019, Dept of Com & Industries, Govt. of A.P. the minimum financial assurance in the form of Bank Guarantee for Rs.50,000/- for below 5.000 hects. will be submitted to the Assistant Director, Department of Mines & Geology, Banaganapalle at the time of Execution of lease deed.

Sl. No.	Head	Area put on use at the start of SCHEME	Additional requirement during the SCHEME period (Ha)	Total (in Ha.)	Area considered fully reclaimed and rehabilitated	Net area considered for calculation (Ha.)
1	2	3	4	5	6	7
1	Area under mining	0.0000	**1.2925**	**1.2925**	Nil	**1.2925**
2	Storage for top soil	--	--	--	--	--
3	Overburden dump	0.0000	**0.4891**	**0.4891**	Nil	**0.4891**
4	Mineral storage	----	----	----	Nil	----
5	Infrastructure	0.0000	0.0250	0.0250	Nil	0.0250
6	Roads	0.0000	**0.0250**	**0.0250**	Nil	**0.0250**
7	Railways	--	--	--	--	--
8	Tailing pond		--			
9	Others	--	--	--	--	--
	SUB- TOTAL	0.0000	--	**1.5464**	--	**1.5464**
	Green Belt	--	**0.1125**	**0.1125**	--	**0.1125**
	Virgin area	0.0000	--	**1.3011**	Nil	**1.3011**
	TOTAL	**2.9600**	--	**2.9600**		**2.9600**

11. Certificate:

Certified that the above mentioned points will be taken care in the Mining Plan for Road Metal over an extent of 2.960hectares (7.311 Acres) in Compartment. No.313 of Bhanumukkala Village, Banaganapalle Mandal, Kurnool District, Andhra Pradesh State.

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.

11.1 Plan, Section etc,

Plans and Sections are submitted along with Mining Plan.

Date: 16-10-2021
Place: Kurnool.

Applicant

(Sri.G.Maddilety Reddy)

RQP & Consultant Geologist

(G.Eswar Reddy)

G. ESWAR REDDY, M.Sc.,B.L.,Ph.D.,
Recognised Geologist
IBM/RQ/HYD/302/2013/A
RQP/DMG/AP/07/2014

This Mining Plan is Approved subject to the Conditions/Stipulations indicated in the Mining Plan Approval Letter No. 1896/mp-80/20/ Dated. 23/10/2021

Deputy Director of Mines & Geology, KURNOOL

ANNEXURE-I

PHTOGRAPH SHOWING THE QUARRY LEASE AREA & SHEET ROCK FORMATION

PROPOSED WORKING AREA

BOUNADRY PILLARS

ANNEXURE-II

GOVERNMENT OF ANDHRA PRADESH
FOREST DEPARTMENT

From
Sri N. Prateep Kumar, IFS.,
Prl. Chief Conservator of Forests &
Head of Forest Force,
Andhra Pradesh,
K.M. Munshi Road, Guntur – 522 004.

To
The Director of Mines & Geology,
5th & 6th Floors,
Anjaneya Towers,
Irbrahimpatnam, Krishna District.

Ref. no. EFS02-15029/11/2020-FCA SEC-PCCF/FCA-1,
Dated:09.08.2021.

Sir,

Sub: APFD – F (C) Act, 1980 – Proposal for diversion of forest land to an extent of 2.96 ha. in compartment no. 313 of Gulamalaiabad South RF, Kurnool Division, for grant of quarry lease for Road Metal in favour of Sri G. Maddilety Reddy – Additional information requested - Reg.

Ref:
1. Director of Mines and Geology, Ibrahimpatnam, Vijayawada Lr. no. 981789/R4-2/2017, Dt.19.03.2018.
2. PCCF & HoFF, A.P., Guntur, Ref.no.EFS02-15029/11/2018-FCA SEC-PCCF/FCA-2, Dt.12.04.2018.
3. Director of Mines and Geology, Ibrahimpatnam, Vijayawada Lr. no. 981789/R4-2/2017, Dt.01.01.2019.
4. PCCF &HoFF, A.P., Guntur, Ref.no.EFS02-15029/11/2018-FCA SEC-PCCF/FCA-2, Dt.22.06.2018.
5. MoEF & CC, IRO, Vijayawada F.No. 4-APC092-2018-CHN/46 dated. 29.07.2021 communicating the Minutes of meeting held on 08.07.2021.

It is informed that, in the reference 4th cited, it has been requested to furnish information of other mining leases for particular mineral with their capacity and average annual production and projected future requirements in the State of Andhra Pradesh in respect of the subject proposal for further processing of the proposal. But, the information is still awaited.

It is also requested to refer the minutes of meeting held on 08.07.2021 on communicated by IRO, Vijayawada in the reference 5th cited wherein it was decided to furnish Approved Mining Plan at the initial stage of the proposal itself i.e., before Stage-I approval.

The authenticated DGPS surveyed sketch of the proposed forest area with geo-coordinates duly indicated land use plan for mining, safety zone, approach road in respect of the subject proposal is sent herewith. Necessary instructions are being issued to the User Agency to furnish draft mining plan based on the above precise area arrived after conducting DGPS survey to the Director of Mines and Geology, A.P., Ibrahimpatnam for necessary action. The Director of Mines and Geology, A.P., Ibrahimpatnam / the representative authorized by him, may approach the Divisional Forest Officer, Kurnool for entry into forest and inspect the precise forest area proposed for mining purpose.

37

Hence, it is requested to take necessary action to furnish the approved mining plan by getting the draft mining plan from the User Agency for the precise forest area and also the information requested in the reference 4th cited, in respect of the above subject proposal.

Yours faithfully,
Sd/- N. Prateep Kumar
Prl. Chief Conservator of Forests &
Head of Forest Force

Encl:- As above.

Copy to the Conservator of Forests, Kurnool for information.

Copy to the Divisional Forest Officer, Kurnool for information and he is requested is requested to allow the User Agency and representative from the mining department authorized by the DMG, AP for inspection of precise forest area proposed for mining duly following the Acts and Rules.

Copy to the Sri G. Maddilety, Banaganapalle, Kurnool District for information and necessary action.

//t.c.b.o//

Superintendent

9/8/2021

9/8/2021

ANNEXURE-III

1193104/2018/FCA -PCCF

FORM 'A'
APPLICATION FORM
(See rule 9A)

To
The Dy. Director of Mines and Geology, Kurnool District.

Through the Asst. Director of Mines & Geology,
Banaganapalle, Kurnool District.

Sir,

I/We hereby beg to apply for **Fresh Quarry Lease** for the period of **10 years** and give below the necessary particulars as required under the Andhra Pradesh Minor Mineral Concession Rules 1966.

01.	Name of the Applicant	:	**Sri G.Maddilety Reddy**
	a) Profession	:	**Business**
	b) Residence	:	
	c) Permanent Address	:	Sri G.Madiiety Reddy, S/o G.Rama Subba Reddy, H.No. 2/41, Fort Area, Banaganapalli Vil & Mdl, Cell: 9494910000
02.	Description of the area applied for	:	Fresh Quarry lease
	a) Situation and boundaries	:	Sketch enclosed
	b) Revenue Survey Nos. or Block No. (In case of Reserve Forest)		Comp.No:313,Gulamaliabad South Block, RF. Banaganapalli Mdl ,Division Forest, Kurnool Dist.
	c) Area	:	3.000 Hects
03.	Name of Mineral to be Quarried	:	Road Metal
04.	Purpose for which it is to be used	:	Roads and Building
05.	Enclosures	:	1.Original Ch.No.6451, dt:22.12.2017 Rs.5,500/- STO at BPL 2.D.D.No: 195921 Rs.30,000/- Date: 22.12.2017 3. Notary Affidavit 4. Applied Sketch 5. Aadhar Card, Pan Card

I/We declare that the above particulars are correct and request that a Quarry Lease may kindly be granted.

Place: Banaganapalle.

Date: 22.12.2017

Yours faithfully,

(G. Maddilety Reddy)

Date :23/12/2017
Time :2:38 PM

MINERAL CONCESSION APPLICATION

Date of Payment : 23/12/2017

Center Name :	ESEVA-FKL090	Transaction Id :	TAMIN011700060944
Applicant Name :	G MADDILETY REDDY	Application No :	MIN011700060944
Type of Applications :	Other Quarry Lease	Category Of Applications :	Fresh Application
Chanllan No :	6451	Extent Applied :	3 Hectars
Amount Paid (in Rs.) :	185.00 (Rs.35 User Charges,Rs.150 Courier Charges)		
Time Limit For Final Disposal :	Within 180 working days from requested date .		

As the Service Tax 12.36 % is added to existing postal charges, Existing Charges Rs.33/ Rs.46. New Charges (Rs. 37 / Rs. 52) will effect from 1st September 2014.

To know the Application Status, Please visit www.meeseva.gov.in.

Note:The Kiosk operator must Courier the Mineral Concession Application form along with all supporting documents to respective Asst. Director M&G. The Courier amount Rs. 150/- Shall be collected from the applicant.

26/12/17

FKL 090
V. Manidhar
Mee Seva Centre
40/817/3, Near S.B.I. Main
Branch, KI[illegible]

ANNEXURE-IV

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]

* * * * *

Sri G. ESWAR REDDY, S/o G Pakkiri Reddy, R/o No: 13-2-155-1, Pavananilayam, Near R.T.C. Bus Stand, Ananthapuram, whose photograph and signature is affixed herein above, having given evidence of his qualification and experience is hereby granted renewal of recognition under rule 14(2) of Granite Conservation & Development Rules 1999 as Qualified Person to prepare Mining Plan.

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

Director of Mines and Geology ★ Govt. of A.P., Hyd ★

Director of Mines & Geology

Director of Mines and Geology
Govt. of A.P., Hyderabad

LOCATION KEY PLAN

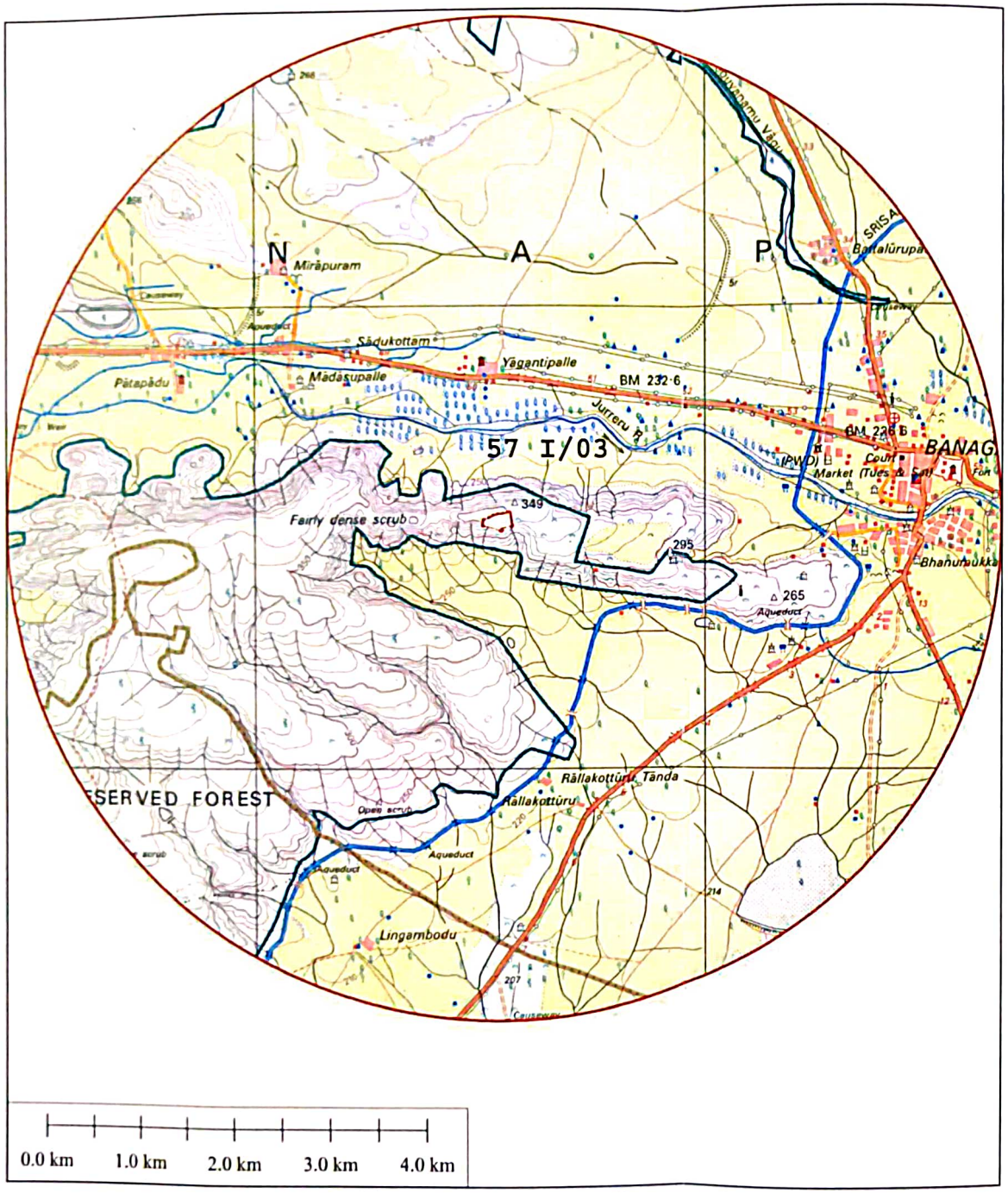


PLATE NO - I

DIRECTION

DIRECTOR OF MINES & GEOLOGY GOVERNMENT OF A.P. HYDERABAD

INDEX

SRI.G.MADDILETY REDDY

Signature of Applicant

APPROVED

Signature of R.Q.P
G. ESWAR REDDY, M.Sc.,B.L.,Ph.D.,
Recognised Geologist
IBM/RQ/HYD/302/2013/A
RQP/DMG/AP/07/2014

THIS IS TO CERTIFY THAT THE INFORMATION IN THIS PLATE IS TRUE AND CORRECT TO THE BEST OF KNOWLEDGE BASED UP ON LEASE MAP AUTHENTICATED BY STATE GOVERNMENT.

Location-Key Plan,	Plate No:-I
MINING PLAN FOR ROAD METAL	
COM.No	313
Extent	2.960 Hectare,
Village	Bhanumukkala
Mandal	Banaganapalli
District	Kurnool (Dist), AndhraPradesh State.
Scale	1:50000
Toposheet No	57 I/03 76°56' 52.02392"E,15°00' 551.27351"N
Applicant	SRI.G.MADDILETY REDDY

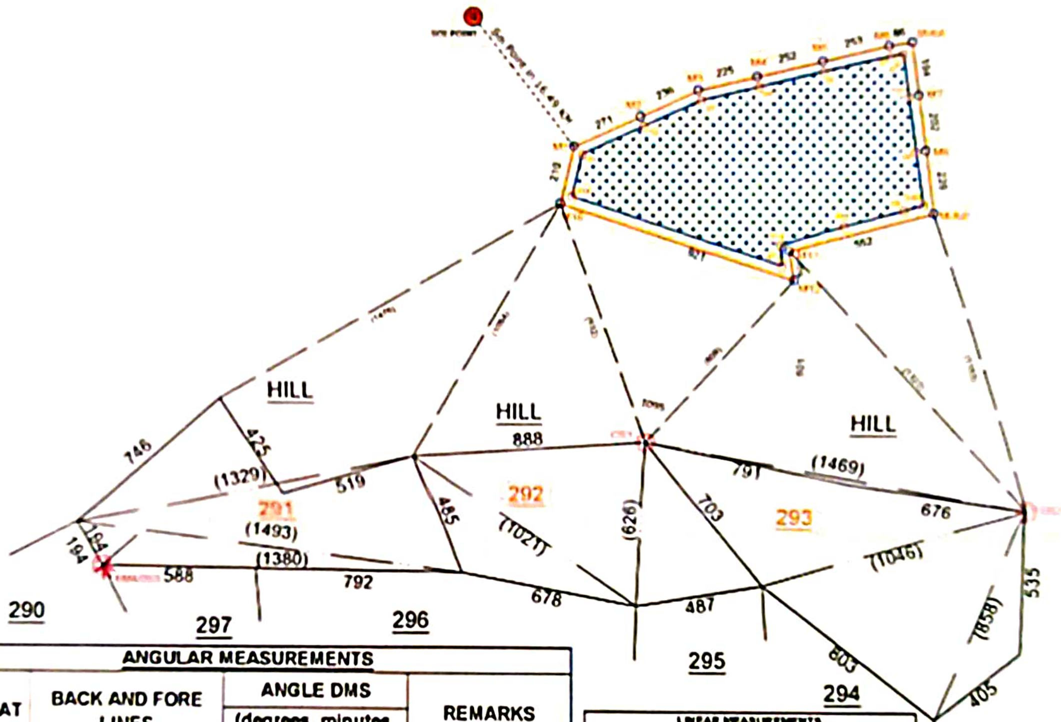
District : Kurnool
Mandal : Banaganapalle
Village : Bhanumukkala
V.No : 32
Field No: Compt.no: 313

Quarry lease Applied area (for Road Metal & Gravel) by Sri G.Maddilety Reddy over an extent of 2.960 Hectares in Compt.no:313 of Gulamaliabad South RF, Dhone Range Kurnool Division, Bhanumukkala(V), Banaganapalli(M), Kurnool District, AP.

SCALE 1: 4000

POINT	ZONE & Sub-Zone	EASTING	NORTHING	ELEVATION (m)	N-LATITUDE	E-LONGITUDE	REMARKS
		UTM CO-ORDINATES (DGPS STATIC MODE)			GEO COORDINATES - MAP DATUM WGS-84 DMS (degrees, minutes, seconds)		
OS1	44P	[illegible]	[illegible]	294.250	[illegible]	[illegible]	OLD STONE
OS2	44P	[illegible]	[illegible]	290.740	[illegible]	[illegible]	OLD STONE
OS3	44P	[illegible]	[illegible]	293.294	[illegible]	[illegible]	OLD STONE
BM	44P	[illegible]	[illegible]	293.294	[illegible]	[illegible]	BENCH MARK
M1	44P	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	MINING AREA
M2	44P	[illegible]	[illegible]	337.053	[illegible]	[illegible]	MINING AREA
M3	44P	[illegible]	[illegible]	343.290	[illegible]	[illegible]	MINING AREA
M4	44P	[illegible]	[illegible]	344.073	[illegible]	[illegible]	MINING AREA
M5	44P	[illegible]	[illegible]	345.403	[illegible]	[illegible]	MINING AREA
M6	44P	[illegible]	[illegible]	344.083	[illegible]	[illegible]	MINING AREA
M-6A	44P	[illegible]	[illegible]	343.952	[illegible]	[illegible]	MINING AREA
M7	44P	[illegible]	[illegible]	334.779	[illegible]	[illegible]	MINING AREA
M8	44P	[illegible]	[illegible]	328.479	[illegible]	[illegible]	MINING AREA
M-8A	44P	[illegible]	[illegible]	314.721	[illegible]	[illegible]	MINING AREA
M11	44P	[illegible]	[illegible]	305.231	[illegible]	[illegible]	MINING AREA
M12	44P	[illegible]	[illegible]	290.013	[illegible]	[illegible]	MINING AREA
M16	44P	[illegible]	[illegible]	315.000	[illegible]	[illegible]	MINING AREA

POINT	ZONE & Sub-Zone	EASTING	NORTHING	ELEVATION (m)	N-LATITUDE	E-LONGITUDE	REMARKS
		UTM CO-ORDINATES (DGPS-STATIC MODE)			GEO COORDINATES - MAP DATUM WGS-84 DMS (degrees, minutes, seconds)		
S1	44P	190012.814	1694983.866	334.735	15°18'49.39726"	78°11'16.24985"	SAFETY ZONE
S2	44P	190059.104	1695004.133	333.612	15°18'50.07561"	78°11'17.79152"	SAFETY ZONE
S3	44P	190101.836	1695022.057	341.296	15°18'50.69581"	78°11'19.21477"	SAFETY ZONE
S4	44P	190145.352	1695032.097	342.202	15°18'51.02104"	78°11'20.66824"	SAFETY ZONE
S5	44P	190193.389	1695042.990	345.293	15°18'51.39273"	78°11'22.27225"	SAFETY ZONE
S6	44P	190243.320	1695053.887	343.331	15°18'51.77985"	78°11'23.94021"	SAFETY ZONE
S-6A	44P	190252.691	1695055.272	342.912	15°18'51.81965"	78°11'24.25347"	SAFETY ZONE
S7	44P	190256.494	1695023.886	335.798	15°18'50.79848"	78°11'24.40457"	SAFETY ZONE
S8	44P	190262.157	1694984.249	326.429	15°18'49.51481"	78°11'24.60438"	SAFETY ZONE
S-8A	44P	190267.767	1694945.626	317.838	15°18'48.26163"	78°11'24.80605"	SAFETY ZONE
S9	44P	190253.298	1694941.893	317.536	15°18'48.13418"	78°11'24.32306"	SAFETY ZONE
S10	44P	190208.941	1694931.078	314.847	15°18'47.76393"	78°11'22.84222"	SAFETY ZONE
S11	44P	190162.862	1694918.013	306.954	15°18'47.31944"	78°11'21.27751"	SAFETY ZONE
S12	44P	190162.546	1694902.629	301.360	15°18'46.81953"	78°11'21.30839"	SAFETY ZONE
S16	44P	190005.105	1694953.644	313.047	15°18'48.41153"	78°11'16.00478"	SAFETY ZONE



POINT AT	BACK AND FORE LINES			ANGLE DMS (degrees, minutes, seconds)	REMARKS
		ANGULAR MEASUREMENTS			
M1	M1 M16	-	M1 M2	127°21'37"	SURVEY POINT
M2	M2 M1	-	M2 M3	180°5'22"	SURVEY POINT
M3	M3 M2	-	M3 M4	169°1'49"	SURVEY POINT
M4	M4 M3	-	M4 M5	179°51'55"	SURVEY POINT
M5	M5 M4	-	M5 M6	180°9'6"	SURVEY POINT
M6	M6 M5	-	M6 M6-A	175°29'48"	SURVEY POINT
M-6A	M-6A M6	-	M-6A M7	89°26'12"	SURVEY POINT
M7	M7 M-6A	-	M7 M8	180°6'43"	SURVEY POINT
M8	M8 M7	-	M8 M8-A	179°44'39"	SURVEY POINT
M-8A	M-8A M8	-	M8-A M11	96°27'15"	SURVEY POINT
M11	M11 M-8A	-	M11 M12	266°23'49"	SURVEY POINT
M12	M12 M11	-	M12 M16	61°55'46"	SURVEY POINT
M16	M16 M12	-	M16 M1	93°55'50"	SURVEY POINT

LINE			AS PER APPLIED (Metric Links)	AS PER APPLIED (m)	AS PER DGPS (m)	REMARKS
			LINEAR MEASUREMENTS			
OS1	-	OS2	1400	203.00	203.000	BASE LINE
OS1	-	M12	900	101.00	101.010	TIE LINE
OS1	-	M16	932	106.40	106.311	TIE LINE
OS2	-	M8-A	1153	230.00	230.079	TIE LINE
M1	-	M2	271	54.20	54.130	SURVEY LINE
M2	-	M3	236	47.20	47.101	SURVEY LINE
M3	-	M4	220	46.00	44.001	SURVEY LINE
M4	-	M5	252	50.40	50.304	SURVEY LINE
M5	-	M6	253	50.00	50.009	SURVEY LINE
M6	-	M-6A	86	17.20	17.134	SURVEY LINE
M-6A	-	M7	194	38.00	38.030	SURVEY LINE
M7	-	M8	202	40.40	40.301	SURVEY LINE
M8	-	M-8A	220	46.00	45.700	SURVEY LINE
M-8A	-	M11	552	110.40	110.441	SURVEY LINE
M11	-	M12	100	21.00	21.020	SURVEY LINE
M12	-	M16	521	104.20	104.203	SURVEY LINE
M16	-	M1	210	42.00	42.004	SURVEY LINE

Legend	
○	Survey Boundary Points
—	Survey Boundary Line
—	FMB Line
●	Soi Point
✱	BM POINT
— — —	G Line
——	TIE Line
○	OLD Stone
▭	Safety Zone area

SL.NO	Description	Area in (Hectares)
1	Mining Area	2.440
2	Safety Zone	0.520
	Total	2.960

NOTE : The DGPS Survey for the area is taken up synchronising nearest survey of GCP(SOI) is situated at Vedavathi hospital, Betamcherla village, Mandal-Batamcherla, District-Kurnool, A.P.SOI E:194277.385, N:1711052.398, Zone 44P.

NOTE : The Survey is conducted in RTK-Mode by using HI-TARGET DGPS Instrument, Model: V60, Datum : WGS - 84, Zone : 44P.

G. ESWAR REDDY, M.Sc.,B.L.,Ph.D.
Recognised Geologist
IBM/RQ/HYD/302/2013/A
RQP/DMG/AP/07/2014

APPROVED

APPLICANT

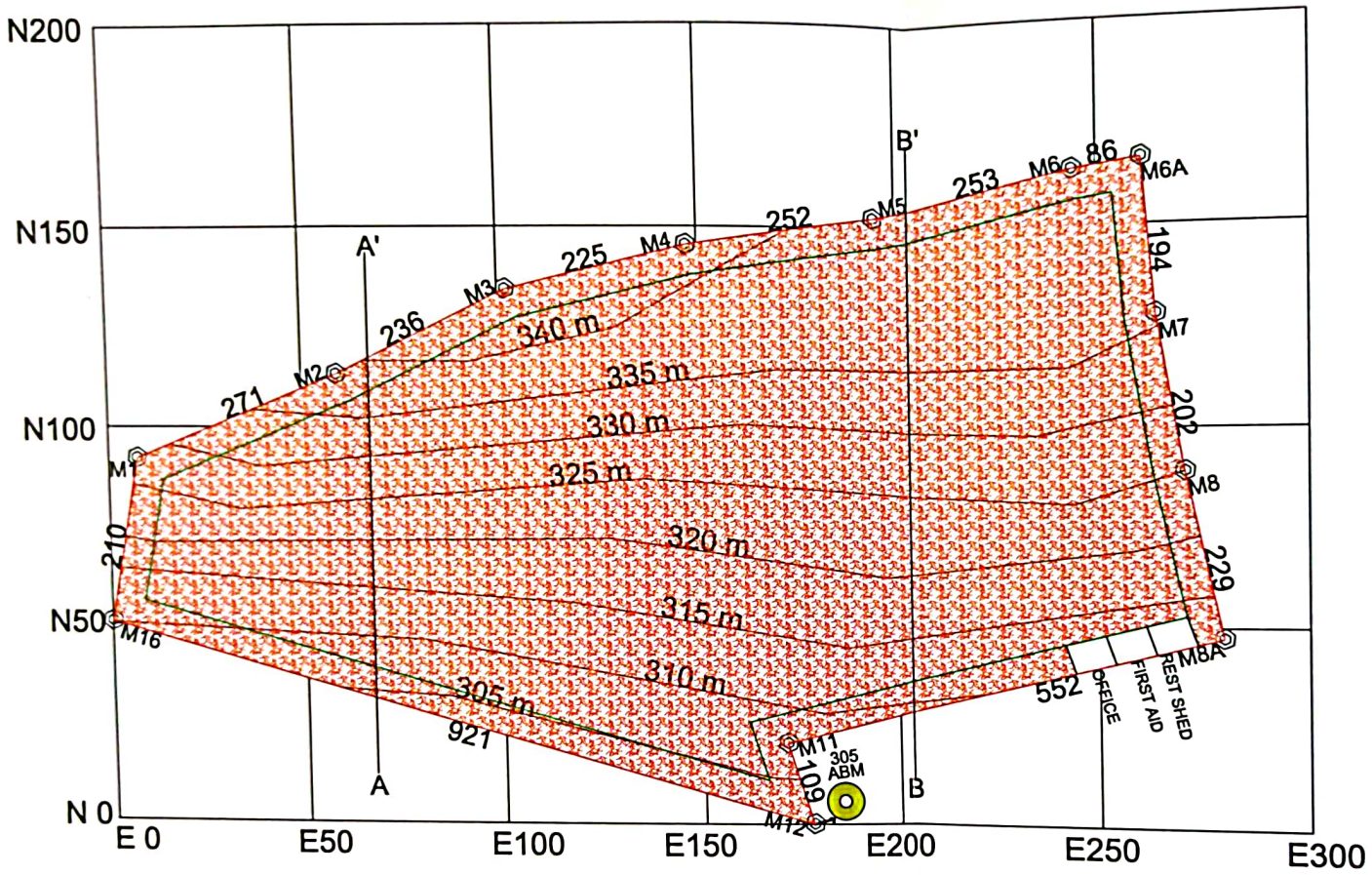
Authorised Person Empanelled Agency
VVN Technologies Pvt. Ltd

SURVEYOR
o/o A D M&G
Banaganapalli

Asst Director of Mines & Geology
Banaganapalli

PLATE.No. 2

TOPOGRAPHICAL CUM GEOLOGICAL PLAN



SCALE

00 10 20 30 40 50

PLATE - III

INDEX

	ASSUMED BENCH MARK
	LEASE BOUNDARY
	CONTOURS
	ROAD
	BUFFER ZONE
	SECTION LINE
	ROAD METAL
	OB

APPROVED

MINING PLAN FOR ROAD METAL

SRI.G.MADDILETY REDDY
IN Compartment.No.313, Ext.2.960, Bhanumukkala (V), Banaganapalli (M) Kurnool (District), AndhraPradesh.

TOPOGRAPHICAL CUM GEOLOGICAL PLAN

Applicant:- SRI.G.MADDILETY REDDY,
H.No:2-41, Fort Area,
Banaganapalli-518124,
Kurnool District,
Andhra Pradesh State.

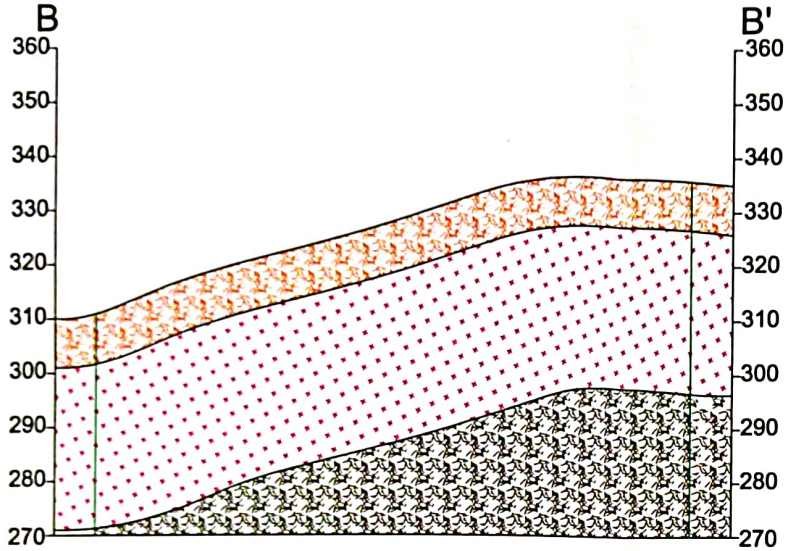
CONTOURS INTERVAL:- 5m SCALE:- 1:1500

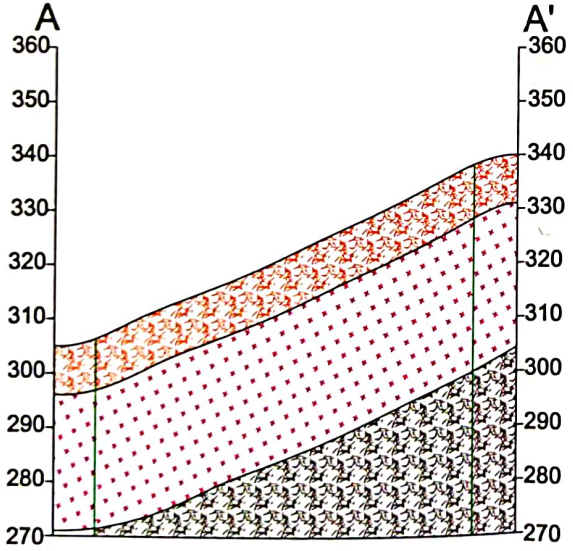
Signature of Applicant

Signature of R.Q.P
G. ESWAR REDDY, M.Sc.,B.L.,Ph.D.,
Recognised Geologist
IBM/RQ/HYD/302/2013/A
RQP/DMG/AP/07/2014

THIS IS TO CERTIFY THAT THE INFORMATION IN THIS PLATE IS TRUE AND CORRECT TO THE BEST OF KNOWLEDGE BASED UP ON LEASE MAP AUTHENTICATED BY STATE GOVERNMENT.

GEOLOGICAL CROSS SECTIONS





SCALE

00 10 20 30 40 50

PLATE - IV

DIRECTOR OF MINES & GEOLOGY GOVERNMENT OF A.P. KURNOOL

INDEX	
	OB
	ROAD METAL
	BLACK SHALE
	BUFFER ZONE
	PROVED ZONE
UPL	ULTIMATE PIT LEVEL

APPROVED

MINING PLAN FOR ROAD METAL

SRI.G.MADDILETY REDDY
IN Compartment.No.313, Ext.2.960, Bhanumukkala (V),
Banaganapalli (M) Kurnool (District), AndhraPradesh.

GEOLOGICAL CROSS SECTIONS

Applicant:- SRI.G.MADDILETY REDDY,
H.No:2-41, Fort Area,
Banaganapalli-518124,
Kurnool District,
Andhra Pradesh State.

CONTOURS INTERVAL:- 5m SCALE:- 1:1000

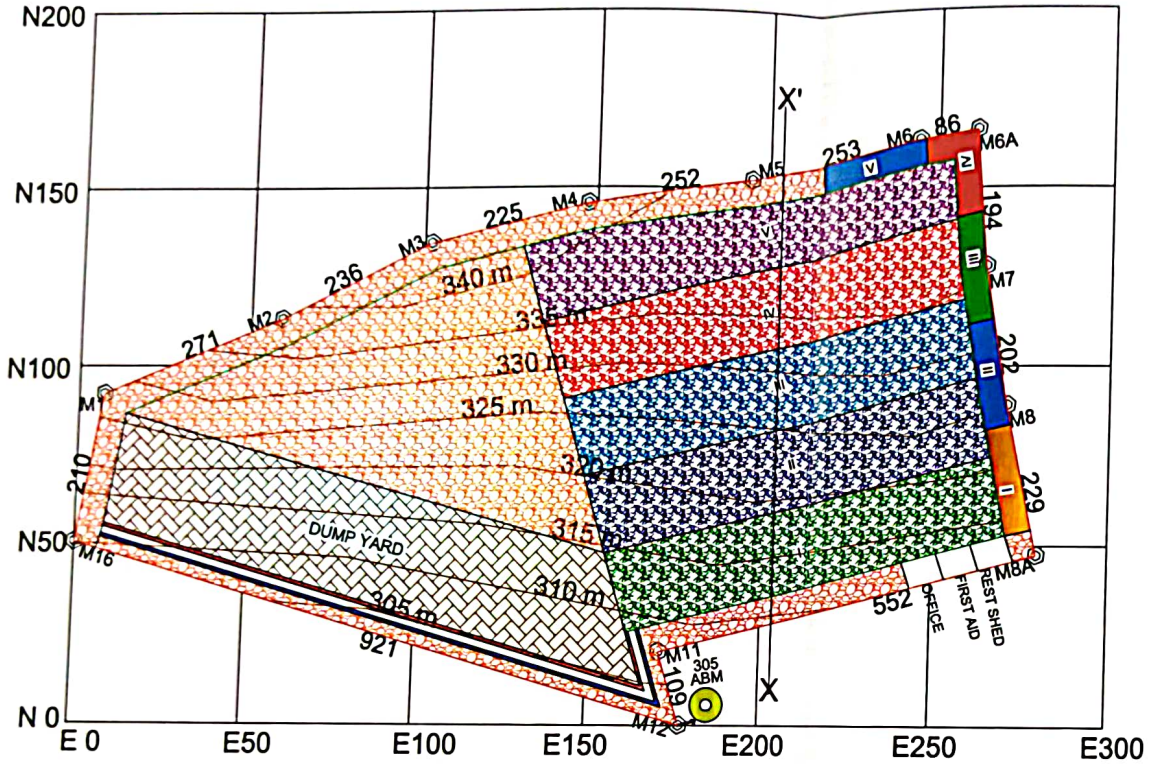
Signature of Applicant

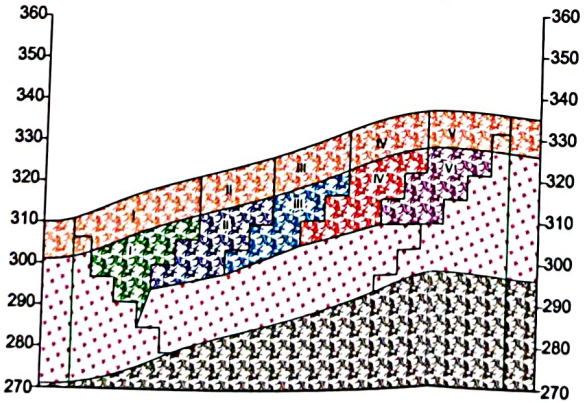
Signature of R.Q.P

G. ESWAR REDDY, M.Sc.,B.L.,Ph.D.,
Recognised Geologist
IBM/RQ/HYD/302/2013/A
RQP/DMG/AP/07/2014

THIS IS TO CERTIFY THAT THE INFORMATION IN THIS PLATE IS TRUE AND CORRECT TO THE BEST OF KNOWLEDGE BASED UP ON LEASE MAP AUTHENTICATED BY STATE GOVERNMENT.

YEAR WISE WORKING PLAN & SECTIONS FOR FIVE YEARS





SCALE

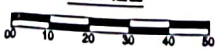


PLATE - V

INDEX	
	ASSUMED BENCH MARK
	LEASE BOUNDARY
	CONTOURS
	ROAD
	BUFFER ZONE
	PROPOSED DUMP YARD
	ROAD METAL
	OB
	BLACK SHALE
	SECTION LINE
	PROVED ZONE
	ULTIMATE PIT LEVEL
	RETAINING WALL
	GARLAND DRAIN

APPROVED

INDEX		
WORKINGS	YEAR WISE	PLANTATION
	I -YEAR	
	II -YEAR	
	III -YEAR	
	IV- YEAR	
	V- YEAR	

MINING PLAN FOR ROAD METAL

SRI.G.MADDILETY REDDY
IN Compartment.No.313, Ext.2.960, Bhanumukkala (V), Banaganapalli (M) Kurnool (District), AndhraPradesh.

YEAR WISE WORKING PLAN & SECTIONS FOR FIVE YEARS

Applicant:- SRI.G.MADDILETY REDDY,
H.No:2-41, Fort Area,
Banaganapalli-518124,
Kurnool District,
Andhra Pradesh State.

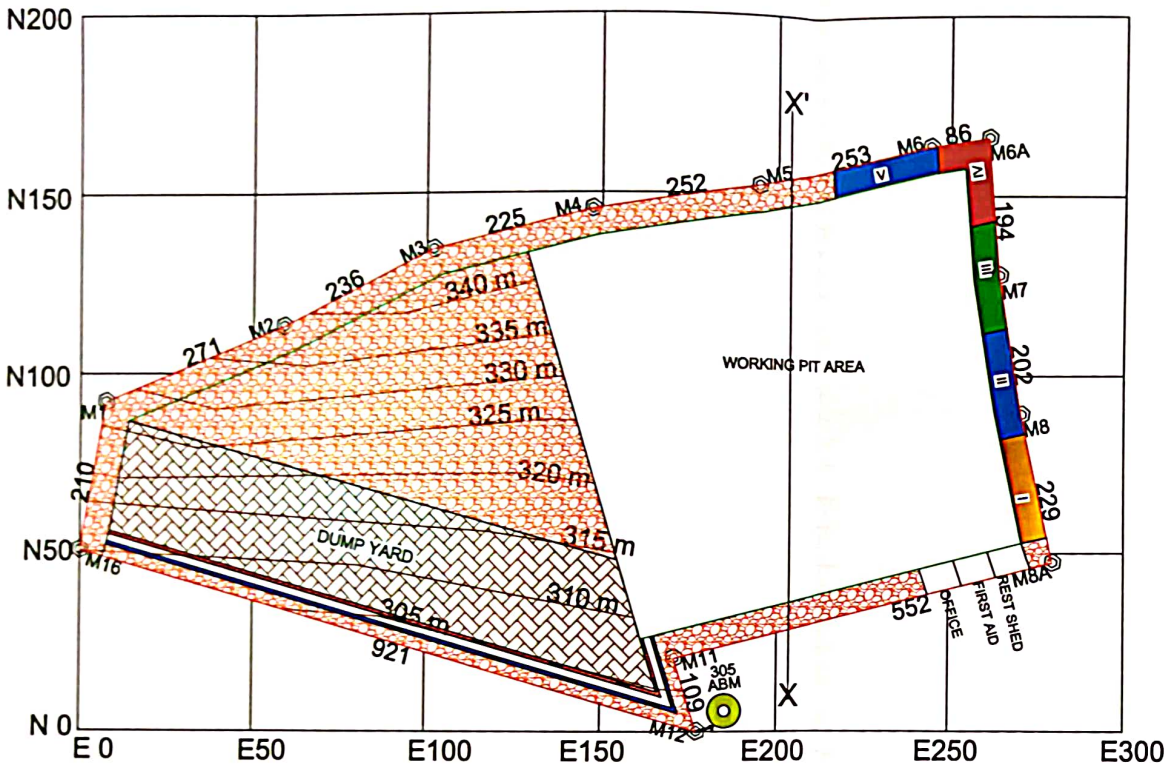
CONTOURS INTERVAL:- 5m SCALE:- 1:1500

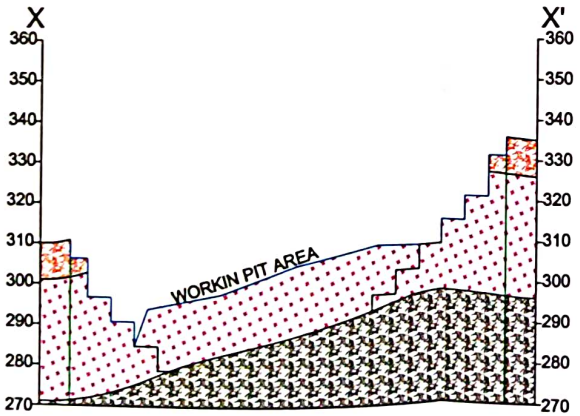
Signature of Applicant

Signature of R.Q.P
G. ESWAR REDDY, M.Sc.,B.L.,Ph.D.,
Recognised Geologist
IBM/RQ/HYD/302/2013/A
RQP/DMG/AP/07/2014

THIS IS TO CERTIFY THAT THE INFORMATION IN THIS PLATE IS TRUE AND CORRECT TO THE BEST OF KNOWLEDGE BASED UP ON LEASE MAP AUTHENTICATED BY STATE GOVERNMENT.

CONCEPTUAL PLAN AND SECTIONS





SCALE

0 10 20 30 40 50

PLATE - VI

INDEX

	ASSUMED BENCH MARK
	LEASE BOUNDARY
	CONTOURS
	ROAD
	BUFFER ZONE
	PROPOSED DUMP YARD
	ROAD METAL
	OB
	BLACK SHALE
	SECTION LINE
	PROVED ZONE
UPL	ULTIMATE PIT LEVEL
	PIT BOUNDRY

APPROVED

INDEX

YEAR WISE	PLANTATION
I -YEAR	
II -YEAR	
III -YEAR	
IV- YEAR	
V- YEAR	

MINING PLAN FOR ROAD METAL

SRI.G.MADDILETY REDDY
IN Compartment.No.313, Ext.2.960, Bhanumukkala (V),
Banaganapalli (M) Kurnool (District), AndhraPradesh.

CONCEPTUAL PLAN AND SECTIONS

Applicant:- SRI.G.MADDILETY REDDY,
H.No:2-41, Fort Area,
Banaganapalli-518124,
Kurnool District,
Andhra Pradesh State.

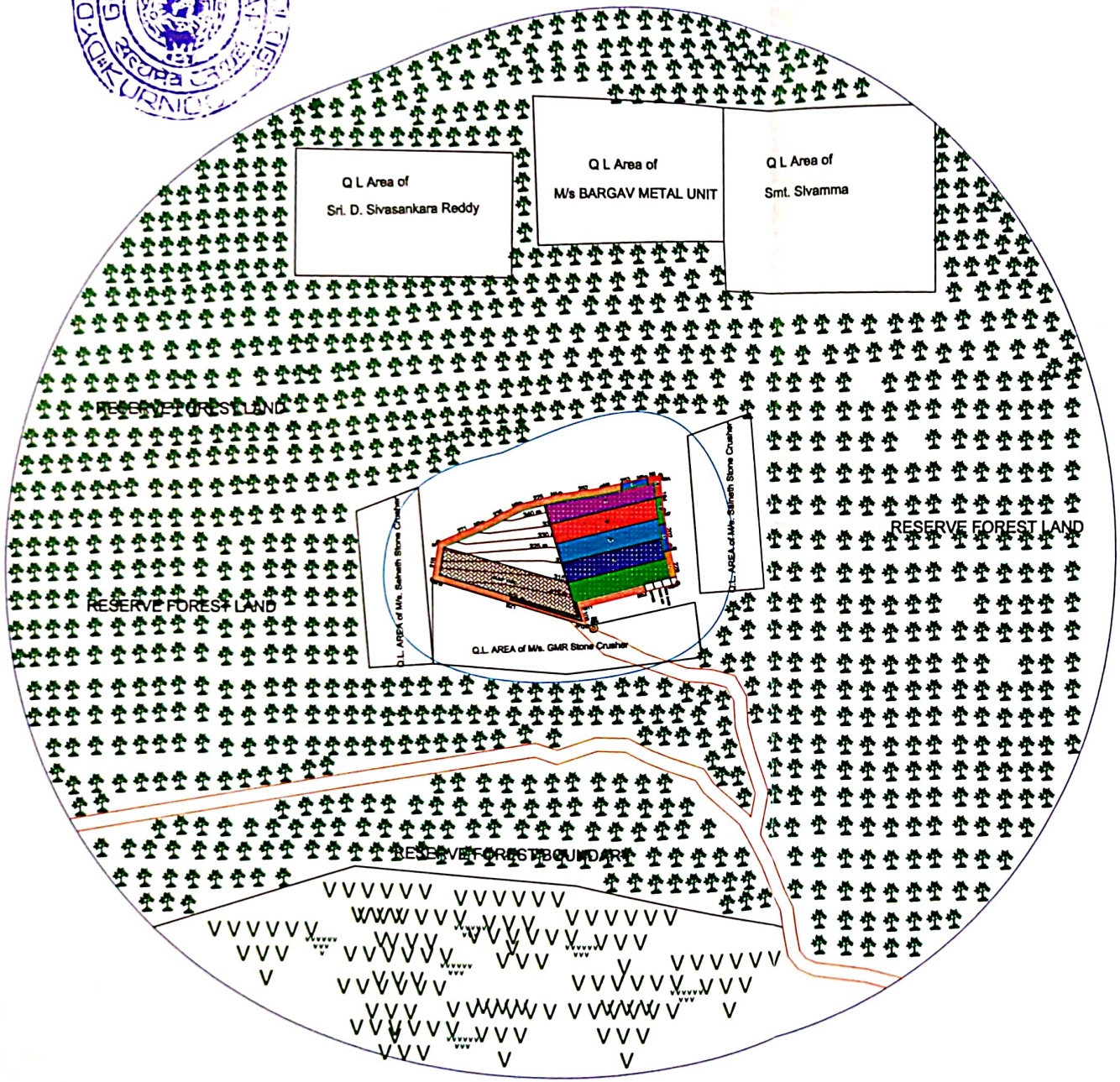
CONTOURS INTERVAL:- 5m SCALE:- 1:1500

Signature of Applicant

Signature of R.Q.P
G. ESWAR REDDY, M.Sc.,B.L.,Ph.D.,
Recognised Geologist
IBM/RQ/HYD/302/2013/A
RQP/DMG/AP/07/2014

THIS IS TO CERTIFY THAT THE INFORMATION IN THIS PLATE IS TRUE AND CORRECT TO THE BEST OF KNOWLEDGE BASED UP ON LEASE MAP AUTHENTICATED BY STATE GOVERNMENT.

ENVIRONMENT PLAN



DIRECTOR OF MINES & GEOLOGY GOVERNMENT OF A.P. REGIONAL OFFICE KURNOOL

N DIRECTION NW W WIND E SW S

PLATE - VII

INDEX

	ASSUMED BENCH MARK
	LEASE BOUNDARY
	CONTOURS
	PIT
	ROAD
	FOREST LAND
	AGRICULTURE LAND
	60m BUFFER ZONE
	500m BUFFER ZONE
	PROPOSED DUMP YARD
	VILLAGES
	HILLOCKS

APPROVED

MINING PLAN FOR ROAD METAL

SRI.G.MADDILETY REDDY
IN Compartment.No.313, Ext.2.960, Bhanumukkala (V),
Banaganapalli (M) Kurnool (District), AndhraPradesh.

ENVIRONMENT PLAN

Applicant:- SRI.G.MADDILETY REDDY,
H.No:2-41, Fort Area,
Banaganapalli-518124,
Kurnool District,
Andhra Pradesh State.

CONTOURS INTERVAL:- 5m SCALE:- 1:5000

Signature of Applicant

Signature of R.Q.P
G. ESWAR REDDY, M.Sc.,B.L.,Ph.D.,
Recognised Geologist
IBM/RQ/HYD/302/2013/A
RQP/DMG/AP/07/2014

THIS IS TO CERTIFY THAT THE INFORMATION IN THIS PLATE IS TRUE AND CORRECT TO THE BEST OF KNOWLEDGE BASED UP ON LEASE MAP AUTHENTICATED BY STATE GOVERNMENT.