GOVERNMENT OF ANDHRA PRADESH
DEPARTMENT OF MINES AND GEOLOGY

From
Sri B.Ravikumar,M.Sc.,
Deputy Director of Mines and Geology,
Block No's 58&59, Old RIMS Hospital,
Opp: Collector Office, Trunk Road,
Ongole, Prakasam district.

To
M/s Balaji Minerals,
Sri Sayyad. Masthan Basha,
S/o Peer Mahmad,
6-1232-1, Current office,
Pamuru Mandal, Prakasam district.

Letter No. 622/MP/Quartz/MRKP/2022, dated: 01.04.2022

Sir,

Sub:- Mines & Minerals – Quarry Lease applied area of M/s **Balaji Minerals for Quartz**, over an extent of Hects 9.39 in Compt.No. 475 of Ekunampuram Village Mundlapadu beat, Veligonda R.F, C.S Puram section, Kanigiri range, Prakasam District – Mining Plan - Approved – Regarding.

Ref:- 1. Govt.Memo 7674/M.II(1)/2014, Ind& Com. Department, dated. 03.02.2016.
2. Proceeding.No.28594/P.RQP/01,dt: 13.05.2016 of the Director of Mines and Geology, Ibrahimpatnam.
3. Memo No. 3861432/P/2020, dated 16.07.2021 of the Director of Mines and Geology, Ibrahimpatnam.
4. Letter received from M/s Balaji Minerals,, on 8.03.2022
5. Inspection Report submitted this office Technical Staff
6. This office Letter No. 622/MP/Quartz/MRKP/2022, dt: 25.03.2022
7. Letter dated 31.03.2022 along with 6 sets of fair Mining Plan from the Lessee / RQP.

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In exercise of the powers conferred by the Director of Mines and Geology, Ibrahimpatnam, through the reference 2nd cited and keeping in view of the Memo issued by the Director of Mines and Geology, Ibrahimpatnam vide reference 3nd cited, I hereby approve the Mining Plan for a period of 5 years in respect of Quarry Lease applied area of M/s Balaji Minerals, for Quartz, over an extent of Hects 9.39 in Compt.No. 475 of Ekunampuram Village Mundlapadu beat, Veligonda R.F, C.S Puram section, Kanigiri range, Prakasam District, under Rule 7A of Andhra Pradesh Minor Mineral Concession Rules,1966 read with G.O.Ms.No.56, Industries & Commerce (Mines-II) Department, dated:30.04.2016. This approval is subject to the following conditions.

1. The proposals contained in the approved mining plan including Progressive Mine closer Plan shall be applicable from the date of execution of the lease and for the mining activities to be carried out within the lease hold area as per the approved mining plan only.
2. This Mining Plan is approved without prejudice to any other laws applicable to the Quarry Lease area from time to time whether made by the Central Government, State Government or any other authority.
3. Approval of the Mining Plan does not in any way imply the approval of the Government in terms of any other provisions of the Mines and Minerals (Development and Regulation) Act, 1957 and amended act 2015 and the Mineral Concession Rules 1960 (Amended Rules 2016) and any other laws including the Forest Conservation Act, 1980.

Contd..2

4. The Mining Plan is approved subject to strictly adhering to the Relevant Regulations of MMR 1961 and obtaining prior permission from Director General Mines Safety whenever and where ever it is required.
5. The approval authority does not owe the responsibility with regard to Assessment of the reserves, erroneous certification made by the R.Q.P. if any and approval is tentative, subject to Modification on new findings at a later date as per the provisions of (23 B & 23 D) of MCDR, 1988, since the evaluation is done on random basis.
6. 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.
7. The applicant / Lessee shall abide the minimum annual production (% of mine plan) approved as required under Rule 12(5)(C) (i) of APMMC Rules 1966 & Schedule IV amended vide G.O Ms No. 90, Inds& Com(M.I) Dept.,dt 17.12.2020

SI.No	year	Minimum Annual production (Percentage of Approved Mining Plan)
1	Year 1	10 %
2	Year 2	30 %
3	Year 3	50 %
4	Year 4 onwards	60 %

8. The Grant is liable for cancellation should it be found that it was grossly inequitable or was made under a mistake of fact or owing to mis representation or fraud or in excess of authority.
9. The applicant/ lessee shall submit the Finance Assurance required under Mine Closure Plan minimum @ Rs.50,000.00 for below 5.000 Hectares. As per the amended Rule 7 of Mineral Concession Rules-1966, G.O.Ms.No.53, dated 27.02.2019, Hence the Financial Assurance of Rs.50,000.00 in the form of Bank Guarantee has to be submitted to the Assistant Director of Mines and Geology, Markapuram.

Encl: Approved Mining Plan.

Yours faithfully,

Deputy Director of Mines & Geology,
Ongole.

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

Copy submitted to the Prl. Chief Conservator of Forests & Head of Forest Force, Aranya Bhavan, A.P, K.M Munshi Road, Guntur for information.

Copy submitted to the Member of Secretary, Andhra Pradesh Pollution Control Board, Visakhapatnam along with AMP for information.

Copy to T.Brahmaiah, RQP/DMG/AP/39/2017, Ecoment Laboratories Pvt Ltd, D.No: 1/2277, 1st floor, Aove Bandhan Bank, Rajivpark Road, YSR Kadapa district for information.

Copy submitted to the Regional Controller of Mines, IBM, Sultan Bazar, Hyderabad along with A.M.P.

Copy submitted to the Director of Mines Safety, Gruhakalpa (Block-2), Nampally, Hyderabad for favour of information.

Copy to the Asst. Director of Mines and Geology, Markapur along with A.M.P.

MINING PLAN INCLUDING PROGRESSIVE MINE CLOSURE PLAN

SUBMITTED UNDER RULE 7(A) OF APMMC - 1966
& RULE 23 OF MCDR 2017.

FIRST FIVE YEARS PLAN PERIOD

For

QUARTZ

EXTENT: 9.390Ha.

Type of Land: Forest land,

Category of the mine: Other Than Fully Mechanized

In

Comp. No. 475 of Mundlapadu Beat,
Veligonda RF, C.S.puram Section,
Kanigiri Range,
Praksham District – 523 112.
ANDHRAPRADESH

OF

M/s Sri Balaji Minerals,
Sri. Sayyad Masthan Basha,
S/o. Peer Mahmad,
6-1232-1, Current Officec, Pamuru Mandal,
Prakasham District– 523 108,
Andhra Pradesh, INDIA.
Cell No: +91 **+91-97054 22884**.
Email Id: sreebalaji325@gmail.com.

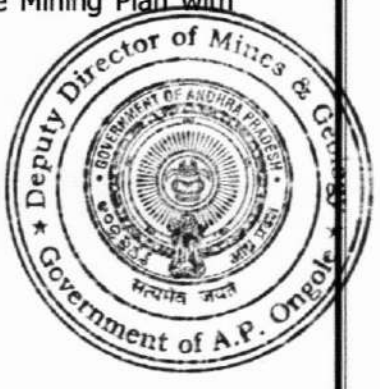
Prepared By:

Dr. T. Brahmaiah,
RQP/DMG/AP/39/2017.
Ecomen Laboratories Pvt Ltd.,
D.No. 1/2277, First Floor,
Above Bandhan Bank,
APHB Colony, Rajiv Park Road,
Y.S.R Kadapa District – 516001.
Cell : +91 99161 99129 & +91 7075694670.
Email Id: kadapa@ecomen.im,
Web Site: www.ecomen.in.

LETTER OF CONSENT

The Mining Plan & Progressive Quarry closure plan in respect of **precise area** for to be grant of quarry lease for Quartz in favor of **M/s. Sri Balaji Minerals, Managing Partner: Sri. Sayyad Masthan Basha**, over an area of 9.390Ha in Comp. No. 475 of Mundlapadu Beat, Veligonda RF, C.S Puram Section, Kanigiri Range, Prakasham District,Andhra State has been prepared by Recognized qualified persons Dr. T. Brahmaiah.

We request to the make further correspondence regarding the Mining Plan with the Recognized Qualified Persons at the following addresses.



Dr. T. Brahmaiah,
RQP/DMG/AP/39/2017.
Ecomen Laboratories Pvt Ltd.,
D.No. 1/2277, First Floor,
Above Bandhan Bank,
APHB Colony, Rajiv Park Road,
Y.S.R Kadapa District – 516001.
Cell : +91 99161 99129 & +91 7075694670.

We hereby undertake that all the proposals made in the Mining Plan by the Recognized Qualified Persons are deemed to have been made with the knowledge and consent it shall be acceptable to me in all respects

M/s Sri Balaji Minerals,

Sri. Sayyad Masthan Basha,
Managing Partner.

RQP CERTIFICATE

This is Certify that the Mining Plan Has Been Prepared as per the rule 7(A) of Andhra Pradesh Minor Mineral Concession Rules, 1966. Whenever specific permission is required for any deviation, the Lessee will approach the Authorities of the Department of Mines & Geology.

The provisions of Mines Act, Rules and Regulations made there under have been observed in preparation of Mining plan for Extraction of **Quartz**. The Quarry lease area is Forest Land over an extent of 9.390Ha in Comp. No. 475 of Mundlapadu Beat, Veligonda RF, C.S Puram Section, Kanigiri Range, Prakasham District, Andhra Pradesh State. The Quarry lease applied area to be granted in favor of **M/s. Sri Balaji Minerals, Managing Partner: Sri. Sayyad Masthan Basha** has been agreed to implement the Mining plan in full and whenever specific permission is required, the Lessee will approach the Director General of Mines Safety. The information furnished in the Mining plan is true and correct to the best of my knowledge.

Deputy Director of Mines & Geology
Government of A.P. Ongole

SRI. T. BRAHMAIAH,
RQP/DMG/AP/39/2017.

CERTIFICATE

This is to certify that the Mining Plan & Progressive quarry closure Plan of precise area to be grant of quarry lease for **Quartz** in favour of **M/s. Sri Balaji Minerals, Managing Partner: Sri. Sayyad Masthan Basha** over an area of 9.390Ha in Comp. No. 475 of Mundlapadu Beat, Veligonda RF, C.S Puram Section, Kanigiri Range, Prakasham District, Andhra Pradesh State has been prepared in full consultation with me. We have understood the contents of the Mining Plan & Progressive quarry closure Plan and agreed to implement the same in accordance with all statutory provision of the rules and wherever specific permissions are required, we will approach the D.G.M.S. Further, standards prescribed by D.G.M.S. The standards prescribed by the D.G.M.S will be strictly implemented.

M/s Sri Balaji Minerals,

Sd Masthan Basha

Sri. Sayyad Masthan Basha,
Managing Partner.

Deputy Director of Mines & Geology
Government of A.P. Ongole

CERTIFICATE

M/s. Sri Balaji Minerals, Managing Partner: Sri. Sayyad Masthan Basha precise area to be grant of quarry lease for **Quartz** in favor of **M/s. Sri Balaji Minerals, Managing Partner: Sri. Sayyad Masthan Basha** over an area of 9.390 Ha in Comp. No. 475 of Mundlapadu Beat, Veligonda RF, C.S Puram Section, Kanigiri Range, Prakasham District, Andhra Pradesh State complies and has taken into consideration all statutory rules, regulations, orders made by the Central or State Government, Statutory Organization, Court etc, and where ever any specific permission is required I will approach the concerned authorities.

We are also give an undertaking to the effect that all the measures proposed in this closure plan will be implemented in a time bound manner as proposed.

M/s Sri Balaji Minerals,

Sd Mabbaan Basha

Sri. Sayyad Masthan Basha,
Managing Partner.

Deputy Director of Mines & Geology
Government of A.P. Ongole

UNDERTAKING

With respect to our proposed **Quartz** Quarry at Comp. No. 475 of Mundlapadu Beat, Veligonda RF, C.S Puram Section, Kanigiri Range, Prakasham District, Andhra Pradesh State over an extent of 9.390Ha. we hereby give an undertaking that we will take all the clearances, from the respective authorities as required i.e, EC, CFE, CFO, permissions from SEIAA, APSPCB & DGMS, etc. marked on the surface plan before commencement of the Mining operations in the said proposed area.

M/s Sri Balaji Minerals,

Sri. Sayyad Masthan Basha,
Managing Partner.

Deputy Director of Mines & Geology
Government of A.P. Ongole

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LIST OF ANNEXURES

Sl. No.	PARTICULARS	Annexure No.
1.	COPY OF THE DMG MEMO	I
2.	COPY OF THE FIRM REGISTRATION	II
3.	COPY OF THE RQP CERTIFICATE	III
4.	ANALSIS REPORT	IV
5.	PHOTOGRAPHS OF MINE LEASE AREA	V

Deputy Director of Mines & Geology ★ Government of A.P. Ongole ★

LIST OF PLATES

SL.NO.	NAME OF THE PLATE	PLATE NO.	SCALE
1	KEY PLAN	1	1: 50,000
2	LEASE SKETCH	2	1: 4,000
3	SURFACE CUM GEOLOGICAL PLAN.	3	1: 2,000
4	GEOLOGICAL CROSS SECTIONS	3A	1: 2,000
5	PROPOSED PRODUCTION AND SECTIONS	4-4A	1: 2,000
6	LAND USE PLAN	5	1: 2,000
7	CONCEPTUAL MINING PLAN & SECTIONS	6	1: 2,000
8	PROGRESSIVE MINE CLOSURE PLAN	7	1: 2,000
9	ENVIRONMENTAL PLAN	8	1: 5,000

This Mining scheme is Approved Sub... the Conditions Stipulations Indic...d in the Mines Scheme Approval Letter No: 622/MP-Qtz/ONGL/2022 Dated: 01/04/2022

MINING PLAN INCLUDING PROGESSIVE MINE CLOSURE PLAN OF M/S. SRI BALAJI MINERALS MANAGING PARTNER SRI. SAYYAD. MASTHAN BASHA FOR QUARTZ IN COMPARTMENT NO. 475 OF MUDLAPADU BEAT, C.S. PURAM SECTION , KANIGIRI RANGE, PRAKASHAM DISTRICT, ANDHRA PRADESH STATE OVER AN EXTENT OF 9.390HECTARES.

INTRODUCTION:

M/s. Sri Balaji Minerals, Managing Partner: Sri. Sayyad. Masthan Basha filed an application for grant of Quarry lease for Quartz in Compartment No. 475 of Mudlapadu Beat, C.S Puram Section, Kanigiri Range, Prakasham District, Andhra Pradesh State over an extent of 9.390Hectares.

In the Ref.No.EFS02-15029/94/2018-FCA-SEC-PCCF/FCA, Dt.13.07.2021 from Principal Chief Conservator Of Forest & Head of Forest Force, Guntur, Principal Chief Conservator Of Forest & Head of Forest Force, Andhra Pradesh that during the virtual meeting held with GoI, MoEF & CC , New Delhi on 08.07.2021 while receiving the proposals of the some applications for which this office forwarded to PCCF for grant of the quarry lease in forest areas, they suggested the authenticated DGPS surveyed Sketch of proposed forest area with Geo coordinates duly indicating land use plan for mining, Safety zone, approach road in respect of the four mining proposals, and necessary instructions are being issued to the above user agencies to furnish the draft mining pan based on the above Precise area arrived after conducting DGPS survey , to the Director of Mines & geology , Andhra Pradesh, Ibrahimpatnam for necessary actin . Further also informed that the DM&G AP the representative authorized by him, may approach the concerned divisional Forest officers for entry into forests to inspects the precise forest area proposed for mining purpose.

In this Connection it is to inform that, as per the existing provisions laid down under APMMC Rules 1996 the AMP shall allowed only after issue of notice (LOI) to the applicant . But as per the present instructions received from PCCF vide Ref.No.EFS02-15029/94/2018-FCA-SEC-PCCF/FCA-,Dt.13.07.2021 cited, in the cases, where the M.C. Applications falls in forest area, the proposal shall sudmit along with AMP duly following the instructions issued in the Circular Memo. No.10205/P1/2001, Dt:29.05.2009. Director of mines & geology, Hyderabad. And Circular Memo. No.10205/P1/2001, Dt:16.09.2009. Director of mines & geology, Hyderabad.

APPROVED

(B. RAVI KUMAR)
Deputy Director of Mines & Geology
ONGOLE, A.P.

Therefore the ADM&G's and DDM&G's in the state are directed while processing mineral concession applications filing in the forest area, proposals shall submit to the DM&G along with the AMP and Strictly adhering the Instructions issued earlier and approach with the concerned DFO to process the mineral concession applications as the procedure intimated by the PCF if necessary.

However, the Approved Mining Plan shall reflect the restrictions to be adopted by the applicant while conducting quarry operations due to the existence of any structures, railway line, roads, water bodies such as river, lake etc., and the stipulated distances as per the various regulations prescribed under Metalliferous Mines Regulations, 1961

The Mining Plan is prepared as per guide lines issued in Form-T in G.O. M.S. No. 56, Industries & Commerce (Mines-II), **Dated: 30th April2016** Under Rule 7 (A) (1) of APMMC Rules, 1966 and Progressive Mine Closure plan under Rule 7 A (3) of APMMC Rules, 1966 for the five years period and submitted to the Deputy Director of Mines & Geology, Ongole, Prakasam District for approval.

I. GENERAL INFORMATION:

1. NAME & ADDRESS OF THE APPLICANT :

PERMANENT & CORRESPONDENCE ADDRESS:

NAME & ADDRESS OF APPPLICANT: **M/S. SRI BALAJI MINERLS**

Managing Partneer : **Sri. Sayyad Mastan Basha,**
S/o. Peer Mahmad,
6-1232-1,Current Office c,
Pamuru Mandal,
Prakasham District– 523108,
Andhra Pradesh, INDIA.

Cell No: **+91 9705422884 &**

Email Id: sreebalaji325@gmail.com

(Address proof is enclosed vide annexure No –II).

2. STATUS OF APPLICANT / LESSEE :

Individual	:	Partnership Firm.
Private Company	:	-
Firm	:	-

3. MINERAL (S) WHICH ARE INCLUDED IN THE LETTER OF INTENT :

Quartz.

4. NAME AND DETAILS OF PERSON EMPLOYED FOR PREPARING MINING PLAN:

Name	:	**Dr.T. Brahmaiah** RQP/DMG/AP/39/2017
Address	:	**Ecomen Laborataries Pvt Ltd** **D.No. 1/2277, First floor,** **Above Bhandhan Bank,** **Rajiv park road, APHB colony,** **Y.S.R Kadapa – 516 002.**
Telephone	:	+91-9916199219.
E. Mail	:	kadapa@ecomen.in

RQP Certificate is enclosed vide **Annexure – III.**

II. LOCATION AND ACCESSIBILITY:

a) Lease Details:

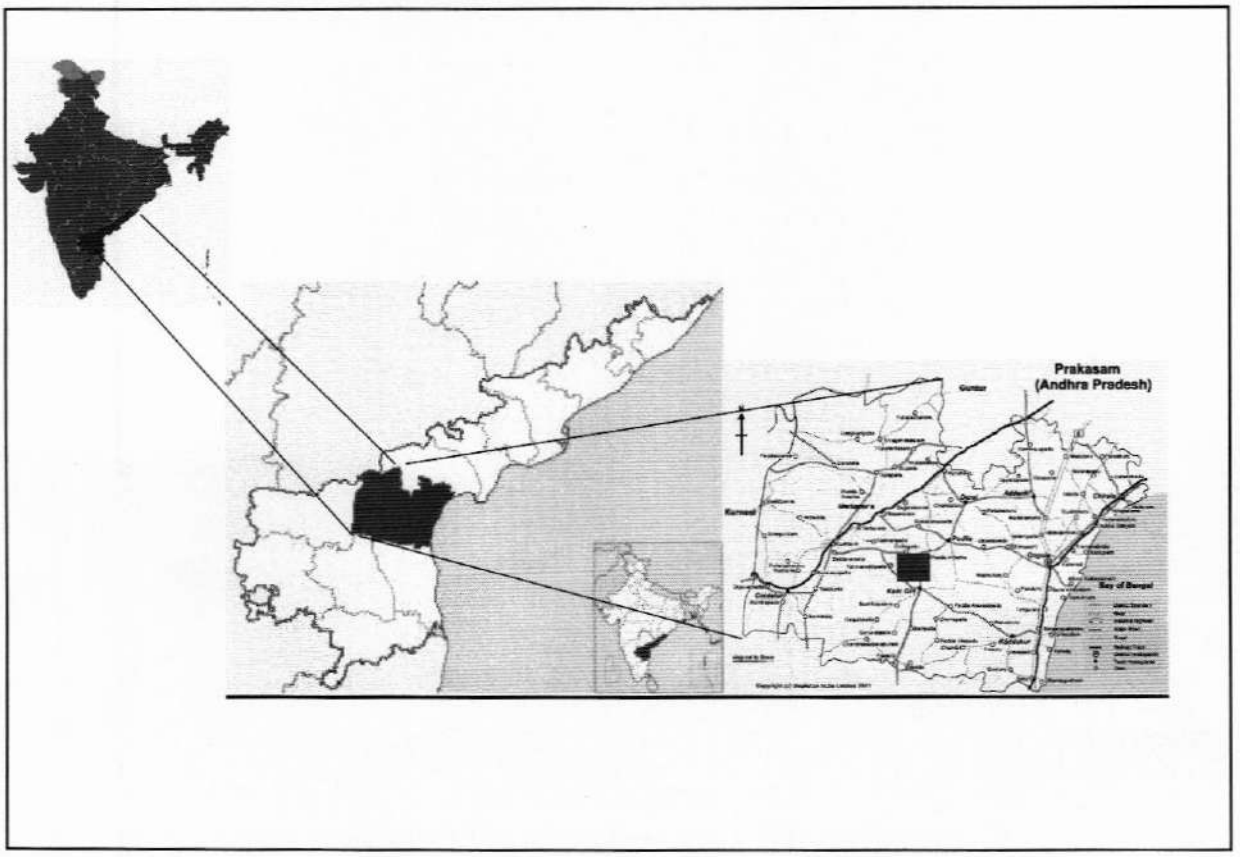
The Applied area for Quartz falls in Topo sheet No.**57 M/3 57M/4** of Survey of India. The Quarry lease located in North latitudes 15.24648316 N to 15.25024307 and East Longitudes 79.22574628 to 79.22958010.

The Key plan prepared on using Topo sheet on 1: 50,000 scale. The key plan cum location map is enclosed as **Plate No-1**.

District and State	:	Prakasam dist and Andhra Pradesh.
Mandal	:	C.S.Puram,
Village	:	C.S.Puram,
Compartment. No.	:	475.
Beat	:	**Mundlapadu,**
R.F.	:	**Veligonda,**
Section	:	**C.S.Puram,**
Range	:	**Kanigiri,**
Lease Area	:	**9.390Ha.**
Pin Code	:	**523 112.**

Deputy Director of Mines & Geology ★ Government of A.P. Ongole ★ GOVERNMENT OF ANDHRA PRADESH

Location of the QL area



The Location of the lease area also marked on the Toposheet and the Key plan is enclosed as Plate No-1.

Sy.no	Village names	Direction	Distance	Populatation
1	Ekunampuram	S	3.6KM	1100
2	Harivemula	SE	4.1KM	750
3	Boyamadugula	SW	4.5KM	368
4	Cherlapalle	SW	4.1KM	935

b) Whether the area is recorded to be in forest (Please specify whether Protected, Reserved etc.) : -No-

c) Existence of public road / railway line, if any nearby and approximate Distance:

The area can be approached from Mandal Head Quarters of Chandrasekharapuram mandal, After Starting from the Chandrasekharapuram mandal then we have to make a right turn towards Ekunampuram after 2.9 km from the Chandrasekharapuram. Then we can reach the Ekunampuram at 6.8 Km, then we have to follow Bullockcart Road further 3.2 Km to reach the Lease area. Giddalur Railway station is the nearest Railway station which is distance of about 34.7kms from the Quarry lease area and Nearest Airport is Kadapa Airport at a distance of 95.6 kms. The nearest port is Krishnapatnam port at a distance of 146.2kms.

d) Toposheet No. with Latitude and Longitude:

Toposheet No. **57 M/3, 57M/4**. The Latitude and Longitude of all the Corner pillars and Ground Control Points are tabulated in the below mentioned tables:

Quartz Lease Area				
S.No	**Point**	**North Latitude**	**East Longitude**	**RL**
1	BM 1	15.24648316 N	79.22795134 E	225.152
2	BM 2	15.24830129 N	79.22574628 E	221.677
3	BM 3	15.25024307 N	79.22723235 E	236.271
4	BM 4	15.24901997 N	79.22958010 E	228.320

The Quarry Lease DGPS survey by DGPS Recognized Agency by Govt. of Andhra Pradesh.

The DGPS Survey sketch authorized by Forest Range Officer(GIS), Principal Chief Conservation of Forest(A.P.), Aranya Bhavan, Saifabad, Hyderabd which is enclosed as **Plate No-2.**

e) Land Use Patten (Forest, Agricultural, Grazing, Barren etc.)

Type of Land	Area (Ha.)
Forest Land	9.390
Revenue Land	--

III. <u>DETAILS OF APPROVED MINING PLAN/SCHEME OF MINING (IF ANY)</u> :

Not applicable.

PART-A

1. GENERAL DETAILS OF THE APPPLIED AREA/MINING LEASE :

a) BRIEF DESCRIPTION OF TOPOGRAPHY, DRAINAGE PATTERN, VEGETATION, CLIMATE, RAINFALL DATA OF THE APPLIED AREA/MINING LEASE AREA :

TOPOGRAPHY :

The applied area for Quartz falls in Topo sheet No. **57 M/3 57M/4** of Survey of India. The Quarry lease located in North latitudes 15.24648316 N to 15.25024307 N and East Longitudes 79.22574628 E to 79.22958010 E.

Topographically the applied area is hillock with the height of 90-95 mts, it is oriented in NE-SW direction. The area topo map showing the location and topography of the applied area is as follows

The highest RL is 230.00 m and lowest RL is 216.00 m. The general seasonal run off is towards slope and ultimately joins the nearest water course as shown in the surface geological plan. The natural vegetation are thorny bushes observed in the area. No agriculture lands are noticed in the vicinity of the QL area. The annual rainfall is 400mm–500mm & maximum temperature 42°C during summer & 18°C during winter months. Humidity is about 70% in the rainy season. The Surface & Geological plan & Cross Sections have been prepared on Scale of 1:2,000 & enclosed vide **Plate No.3 & 3A**.

Geology &Field Observations:-

Geologically the applied area belongs to Peninsular Gneissic Complex of archean. Applied area is hillock, oriented in SW – NE and consisting of quartz reef which is striking in SW - NE with vertical dip, quartz exposed in the applied area is dull white in colour, showing vitreous luster, concoidal fracture, quartz reef is falls in eastern side of the applied area. The length of the reef is 550mts and width is varies from 130 – 140 mts, big quartz boulders besides the reef on either side slopes.

A. Relief :14Meters.

B. Gradient: 1in 4.

C. Slope Angle: 4^0

II). Drainage pattern:

The drainage pattern of the Quarry Lease area is sub-dendritic. No perennial streams or any other water bodies are observed within the Quarry Lease area and in its vicinity.

III). Water bodies such as rivers, likes, nala(canal), reservoirs etc.

There no Water bodies present in the Lease area.

IV). Climate and Rainfall:

The area falls in semi-arid zone of peninsular India. The climate is tropical with temperatures ranging from 24° C to 45° C in summer and 10° C to 26° C in the winter. The normal annual rainfall is about Maximum 224.7 mm in August and minimum 40mm in July in 2017, according to http://hydro.imd.gov.in/hydrometweb/(S(prxk2w555tqarm55yad13qvp))/DistrictRainfall.aspx

V). Land Systems: Forest Land (Veligonda R.F.) Covered with Thorny Bushes and small Trees.

VI). Land Use Pattern: Hill Hock.

VII). Habitation areas and demography:

SY.NO	VILLAGE NAMES	DIRECTION	DISTANCE	POPULATATION
1	Ekunampuram	S	3.6KM	1100
2	Harivemula	SE	4.1KM	750
3	Boyamadugula	SW	4.5KM	368
4	Cherlapalle	SW	4.1KM	935

VIII). Road, Electric Lines, Telephone lines etc.:

In the leased area there are no roads and electrical lines and telephones lines.

IX). Religious places, Sacred, Archaeological and Heritage Sites etc.,

Not Available.

X). Vegetation:

Scanty vegetation in the form of grassy bushes and thorny shrubs is observed in parts of the lease area where topsoil thickness is significant. No big trees or plants are observed over the applied area.

XI). Forest cover with density, reserve forest, wild life sanctuaries, coastal regulation zone, eco-sensitive zones etc.

N.A.

XII). Flora and Fauna:

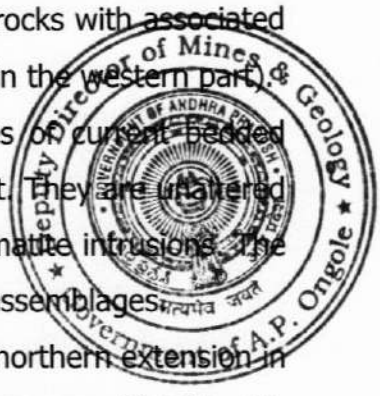
The Subject area does not consists trees which are used as Firewood And also some throny bushes covered the area. There is no report of existences of wild animals on the region.

GEOLOGY AND EXPLORATION:

(a) BREIF DESCRIPTIONS OF REGIONAL GEOLOGY WITH REFERENCE TO LOCATION OF LEASE AREA. :

REGIONAL GEOLOGY:

The Nellore schist belt trends NNE-SSW.N-S and NNW-SSE for nearly 140km form Darsi south ward through C.S Puram in prakasam district. It consists of two assemblages of rocks, the high-grade metamorphic rocks in the eastern and southern parts of the belt and low-grade green schist facies rocks with associated lower amphibolites facies (HBL-schist-amphibolite developed in the western part). The low grade schist of green schist of the west comprises of current bedded quartzite, quarz-schist, chlorite schist, phyllite and metabasalt. They are unaltered where they are in contact with migmatite and devoid of pegmatite intrusions. The green schist assemblages are younger then the lower grade assemblages. Geologically the area belongs to Nellore schist belt formed it northern extension in the area of Pamur, PC Palli and C.S.Puram Mandals in Prakasam District, AP. Schist folding in hill, range and trending NNW-SSE and in the northern area it has NE-SW direction.



Shale; limestone	Nandyal Shale	Kurnool Group		MIDDLE PROTEROZOIC
Limestone with shale	KoilkuntlaLimestone			
Quartzite	Paniam Quartzite			
Shale	Owk Shale			
Massive Limestone; flaggy limestone	Narji Limestone			
Quartzite with conglomerate	Banganapalle Quartzite			
Shale with phyllite; dolomite/limestone; quartzite	Cumbum Formation	Nallamalai Group	CUDDAPAH SUPER GROUP	
Quartzite; slate	Bairenkonda Quartzite			
Quartzite; shale	Gandikota Quartzite	Chitravati Group		
Shale, tuff; dolomite / limestone; quartzite	Tadpatri Formation			
Quartzite with conglomerate	Pulivendla Quartzite			
Dolomite, chert, mudstone, quartzite; Basic flows; basic intrusives	Vempalle Formation	Papaghni Group		
Quartzite/arkose with conglomerate	Gulcheruvu Quartzite			
EPARCHAEAN UNCONFORMITY **DHARWAR SUPERGROUP** **PENINSULAR GNEISSIC COMPLEX**			Lower Proterozic to Archaean	

(b) DETAILED DESCRIPTION OF GEOLOGY OF LEASE AREA. :

LOCAL GEOLOGY:

The quartz vein is intruded into the schist and phyllitic formations. Basic dykes are noticed towards the South Western part of the isolated quartz and quartzite patches are notice. The quartz ore is exposed 2 to 5 meters above the surface. Therefore the quartz intrusions are noticed within the schist and phyllite formations. Intemittent quartz boulders are noticed. The quartz vein is striking along NE-SW. It is observed as the quatz vein is superficial deposit which cannot be penetrated at deeper depth.

(c) DETAILS OF PROSPECTING LICENSE HOLDER:

No separate agency has been carried out the prospecting agency the applicant himself will carry the prospecting work.

(d) DETAILS OF PROSPECTING/EXPLORATION ALREADY CARRIED OUT : NA

(e) SURFACE PLAN AREA ON 1:1000 OR 1:2000 SCALE:

The updated Surface plan has been prepared with scale of 1:2000. with is enclosed vide **Plate No. 3** showing all the mine workings and other details, etc.

(f) GEOLOGICAL PLAN PREPARED ON SCALE OF 1:1000 OR 1:2000:

The updated Geological Plan has been prepared with scale of 1:2000. is enclosed vide **Plate No. 3** showing all the mine workings and other details, etc.

(g) GEOLOGICAL SECTIONS ON NATURAL SCALE AT SUITABLE INTERVAL ACROSS THE LEASE AREA OR APPLIED AREA:

5 Geological cross sections has been prepared with scale of 1:2000. across the Quarry Lease Applied area from boundary to boundary and is enclosed vide **Plate No. 3A.**

(h) BROADLY INDICATE THE FUTURE PROGRAMME OF EXPLORATION WITH DUE JUSTIFICATIION TAKING INTO CONSIDERATION THE FUTURE TENTATIVE EXCAVATION PROGRAMME PLANNED IN NEXT FIVE YEARS:

Year	No of bore holes (DTH)	Grid interval in m	Total meter age	No. of pits, dimensions and volume	No. of Trenches, dimensions and volume
I	Nil	Nil		Nil	Nil
II	Nil	Nil		Nil	Nil
III	Nil	Nil		Nil	Nil
IV	Nil	Nil		Nil	Nil
V	Nil	Nil		Nil	Nil
Total	**Nil**	**Nil**		**Nil**	**Nil**

(i) Reserves and Resources as per UNFC

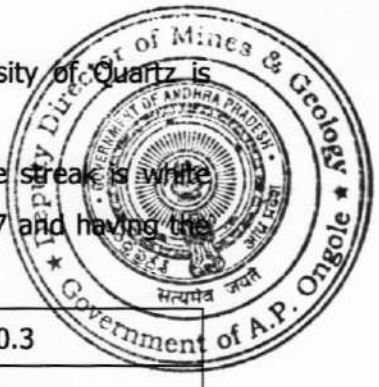
a. Type of Deposit As Per UNFC Guidelines:

Quartz is a localized mineral available, specially utilized for Glass Industries, Steel Plant and Ferro Silica Plant purposes and other purpose depending upon the characteristics of the rock.

Parameter–Grade, Threshold Value, Sectional Area & Bulk Density:

Spacific parameters are considered for the Quartz. The bulk density of Quartz is considered at 2.50 T/m^3 to estimate the reserves.

The Quartz available in this area is available in massive form. The streak is white color and having the conchoidal fracture and with the hardness of 7 and having the Chemical composition of SiO_2.



1	* Loss on Ignition	IS:1917 (PART-1)	0.3
2	Silica as SiO_2	*IS-1917(part-3)-1992 (R A - 2005)*	99.62
3	Ferric Oxide as Fe_2O_3	*IS-1917(part-5)-1992 (R A - 2005)*	0.01
4	Alumina as Al_2O_3	*IS-1917(part-4)-1992 (R A - 2006)*	<0.01
5	*Calcium as CaO	IS:1917 (PART-6)	0.01
6	*Magnesium as MgO	IS:1917 (PART-6)	<0.01
7	*Sodium as Na_2O	IS:1917 (PART-2)	0.01
8	*Potassium as K_2O	IS:1917 (PART-2)	<0.01
9	*E.C. Micro Siemens	5% Extraction Solution	10
PHYSICAL PROPERTIES			
1	COLOUR	WHITE	
2.	Specific Gravity	2.50	

b. Status of Exploration: G1

c. Justification for UNFC Classification

GEOLOGICAL AXIS

1. Geological Survey:

i. Mapping: Detailed geological survey was carried out in the lease area on 1:2,000 scale with 1.0 meters contour intervals.

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 1:2,000 scale duly marked with surface geological features, TBM etc., and presented on **Plate No-3**.

iii. Topo Grid/ Triangulation Stations: The topo grid with Geological cross- sections has been prepared on 1:2,000 scale showing litho-units.

- Geochemical Survey: The Deposit is hill deposit and sample collated at surface and get analysed from the laboratory. The Chemical Composition of the Quartz present in the area is SiO_2.

1	* Loss on Ignition	IS:1917 (PART-1)	0.3
2	Silica as SiO_2	*IS-1917(part-3)-1992(R A - 2005)*	99.62
3	Ferric Oxide as Fe_2O_3	*IS-1917(part-5)-1992 (R A - 2005)*	0.01
4	Alumina as Al_2O_3	*IS-1917(part-4)-1992 (R A - 2006)*	<0.01
5	*Calcium as CaO	IS:1917 (PART-6)	0.01
6	*Magnesium as MgO	IS:1917 (PART-6)	<0.01
7	*Sodium as Na_2O	IS:1917 (PART-2)	0.01
8	*Potassium as K_2O	IS:1917 (PART-2)	<0.01
9	*E.C. Micro Siemens	5% Extraction Solution	10

2. Geophysical Survey: Not carried out.

3. Technological Survey:

- Detailed topographical and geological survey was carried out on 1:2,000 scale showing all the surface features, contours at 1.0m interval, the lease boundary, surface Geology & Structural features.
- The maximum thickness of Quartz up to 200RL depth below the overburden is considered for proved reserve.

Reserves are estimated by cross sectional area method.

FEASIBILITY AXIS

a. Geology: The detailed Geology of the area has been presented in Part-A.

b. Mining: Quartz will be exploited through opencast other than fully mechanized mining methods. The quarrying operation will be carried out in a systematic way by forming benches of 06m height with proportionate width will be maintained. Drilling & Blasting required, because the ore is hard in nature.

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

commitment to environment protection.

d. Processing: No processing of ROM. The ROM will be directly saleable to the buyers as required with industry specification. Mining operations will be carried out by deploying the following machinery:

The list of mining machinery's will be used in the mines are given below:

S. No	Type of machine	Nos	Dia of hole in mm	Size / capacity	Motive power
1	DTH	1	110		Diesel
2	Compressor	1	-	400cfm	Diesel
3	Excavators	1	-	210MT/hr	Diesel
4	Tippers	2	-	17MT	Diesel
5	Wheel loader	1	-	$3m^3$	Diesel
6	Water Tanker	1	-	4000lt	

e. Infrastructure:

The entire necessary infrastructure such as office, rest shelter, magazine, water tankers, power connection etc., will be provided once the mining plan is approved. All these infrastructures will be built inside of the lease area. Establishment of crusher also will be outside the lease area. The lease area is connected with all-weather asphalted roads to the mandal and district headquarters.

f. Costing:

The cost of production of Quartz works out to be approximately Rs. 250/- per ton.

g. Marketing: NA

h. Economic Viability: It is surely eeconomic and viable.

i. Other Factors: Relevant clearances shall be obtained for continuing the mining operations in the lease area.

ECONOMIC AXIS

a. Detailed Exploration:

Detailed topographic survey and Geological mapping of the applied area was subject to detailed exploration by field traverses and well inventory data. The depth of the Quartz deposit is identified by based on the exposures available in the working benches.

b. Mining Reports / Mining Plan: This is the first Mining plan being submitted.

c. Specific End-Use Grades of Reserves (Above Economic Cut-Off Grade):NA

d. Specific Knowledge of Forest/ Non-Forest and Other Land Use Data: The entire lease area is located in Government wasteland.

k. Feasibility report along with financial analysis per economic viability of the deposit:

The cost of production of Quartz is arrived at INR. 250/- per ton inclusive of taxes and royalty.

l. Reserves:

i. Mining Method, Recovery Factor, Mining Losses, and Processing Loss etc.:
Quartz will be mined by open cast other than fully mechanized method. The quartz reff recovery factor is considered as 90% with 10% intercalated waste.

ii. Cut-off Grade, Ultimate Pit Depth Proposed: There is no cut-off grade as the ROM will be put to use for Quartz. The Ultimate Pit Limit (UPL) will be reached to 218m in SW portion of the lease area during the end of this plan period.

iii. Mineral/Ore Blocked Due to Benches, Barriers, Pillars, Road, Railway, River, Nala, Reservoir, Electric Line and Other Statutory Barriers etc.:

No mineral will be blocked in 7.5 m safety barrier zone, Because We Places Our Benches at Soil area and digs into the mineral Vein. And no Mineral will be Lost due to the road and Safety Zone.

II) Indicate geological and recoverable reserves and grade, duly supported by standard method of estimation and calculations along with required sections (giving spilt up of various categories i.e., proved, probable, possible). Indicate cut-off grade. Availability of resources should also be indicated for the entire leasehold.

Experience gained in this type of deposits has been utilized; the quartz reef and floating is exposed in entire area of the lease. As quartz deposit is spread widely in the lease area, Resources are calculated up to the 230RL. All the deposit which is exposed in all the three dimensions is considered as proved. From the field trials conducted in the sector and the information gathered, the specific gravity is found to be 2.50t/m^3 and the recovery factor is found to be 90%. The Cross sectional method has been used to calculate the reserves for quartz, Cross-sections have drawn on a scale 1:2000. The cross sectional area of deposits is multiplied by sectional interval to give volume. The volume is multiplied by the bulk density and considering 80% recovery, the reserves are computed and tabulated. The Total Geological resources of Quartz is around **21,18,825(8,47,530Cum)** Tons. Mineable reserves of Quartz **20,09,441Tons(8,03,776.40Cum)**. At the given rate of average proposed production of the life of the mine is (**20,09,441/92,475**) about 21.73years (**says 22years**).

GEOLOGICAL RESERVES						
Section	**Sectional area (Sq.m.)**	**Sectional Influence (m)**	**Volume (Cu.m.)**	**ROM @2.5t/cmt (tons)**	**Saleable Quartz (90%) (tons)**	**Waste (10%) (tons)**
Proved reserves						
A-A'	3,962	60.00	2,37,720	5,94,300	5,34,870	59,430
B-B'	3,771	60.00	2,26,260	5,65,650	5,09,085	56,565
C-C'	3,057	60.00	1,83,420	4,58,550	4,12,695	45,855
D-D'	2,385	60.00	1,43,100	3,57,750	3,21,975	35,775
E-E'	2,520	60.00	1,51,200	3,78,000	3,40,200	37,800
Grand Total			**9,41,700**	**23,54,250**	**21,18,825**	**2,35,425**
RESERVES BLOCKED IN 7.50M BUFFER ZONE						
Section	**Sectional area (Sq.m.)**	**Sectional Influence (m)**	**Volume (Cu.m.)**	**ROM @2.5t/cmt (tons)**	**Saleable Quartz (90%) (tons)**	**Waste (10%) (tons)**
Proved reserves						
A-A'	3,962	7.50	29,715	74,288	66,859	7,429
E-E'	2,520	7.50	18,900	47,250	42,525	4,725
Grand Total			**48,615**	**1,21,538**	**1,09,384**	**12,154**
MINABLE RESERVES						
Section	**Sectional area (Sq.m.)**	**Sectional Influence (m)**	**Volume (Cu.m.)**	**ROM @2.5t/cmt (tons)**	**Saleable Quartz (90%) (tons)**	**Waste (10%) (tons)**
Proved reserves						
A A'	3,962	52.50	2,08,005	5,20,013	4,68,011	52,001
B B'	3,771	60.00	2,26,260	5,65,650	5,09,085	56,565
C-C'	3,057	60.00	1,83,420	4,58,550	4,12,695	45,855
D-D'	2,385	60.00	1,43,100	3,57,750	3,21,975	35,775
E-E'	2,520	52.50	1,32,300	3,30,750	2,97,675	33,075
Grand Total			**8,93,085**	**22,32,713**	**20,09,441**	**2,23,271**

As per the UNFC the total Reserves and Resources in the Mining Lease area under grant are as follows.

Classification	Code (UNFC)	Quantity (in Tons)
1	2	3
Total Mineral Resource (A+B)		**21,18,825**
A. Mineral Reserves.		
(1) Proved Mineral Reserve		**20,09,441**
Quartz	111	**Nil**
(2) Probable Mineral Reserve		**Nil**
Quartz	121	---
Quartz	122	**20,09,441**

B. Total Remaining Resources		
1) Feasibility Mineral Resource		
2) Prefeasibility Mineral Resource	211	**Nil**
3) Measured Mineral Resource	221 & 222	**1,09,384**
4) Indicated Mineral Resource	331	**Nil**
5) Inferred Mineral Resource	332	**Nil**
6) Reconnaissance Mineral Resource	333	**Nil**
	334	**Nil**

Total Geological Reserves = **21,18,825 Tons (8,47,530Cum).**

The reserves Blocked under

Buffer zone (7.5 m) and Bench slops= **1,09,384 Tons (43,753.60Cum).**

Mineable Reserves = **20,09,441 Tons (8,03,776.40Cum).**

Mineable reserves and Life of the Quarry

Initially the total quantity of saleable reserves is considered as (economic) Marketable reserves. In this way a total Mineable reserves of **20,09,441 Tons(8,03,776.40Cum)** are available in this lease area. The average proposed production is **92,475 Tons(36,990Cum)** per year. At this rate of production, the expected life of the mine is **21.73years**. The calculations are given as below.

Saleable reserves/Annual production= (**20,09,441Tons/92,475Tons**) = **21.73years** (say **22.00yeras)**. Life of the mine has been estimated based on the available proved reserves at the time of preparation of the mining plan. **However, the life of the mine may change on the review of reserves at the end of plan period.**

2. MINING :

(a) OPEN CAST MINING

(i) DESCRIPTION OF EXISTING/PROPOSED METHOD FOR EXCAVATION WITH ALL DESIGN PARAMETERS INDICATING ON PLANS /SECTIONS:

Quartz in the quarry is excavated by other than fully mechanized method of open cast mining. The material in the quarry area is excavated by conventional method of open cast mining through drilling, blasting, loading and shifting through tippers before crushed. Mechanized methods of operation are proposed to be adopted during ensuing Mining plan period. This method and mode of operation is taken into account mainly for the interest of safe and scientific mining, conservation of mineral and protection of environment by consideration of all the parameters and the geological attitudes of the rock body and mine is proposed to work with conventional opencast method of mining, the mining pit is designed such that the height is about 06m and the width is more than 06m, maintaining 60° pit slope. The ultimate Pit Limit so drawn on the basis of the field studies, exploration data and the updated geological mapping carried out so far in the area remains very tentative. However, based on the future exploration the defined, ULTIMATE PIT LIMIT is likely to change. Since there is drilling and blasting in this said mine, to excavate/exploit the road metal, initially it will be drilled and blasted. Machinery and Labours will deployed for removal/ winning/ excavation of the rock and loading the same in to tippers for transportation.

PROPOSED PARAMETERS OF THE WORKING BENCHES:

The mining will be done by other than fully mechanized open cast method. The lessee wishes to do mine by other than fully mechanized by deploying machinery and as well as drilling & blasting will be required for the extraction of quartz. The exposed portion of quartz running SW - NE will be removed. Mining is proposed from top of the hillock to bottom. This method and mode of operation is taken into account mainly by considering all the parameters and the geological attitudes of the ore body and mine is proposed to work with Mechanized method of opencast mining. Initially, the outcrops shall be excavated by slicing method and then after reaching a depth of 06 meter from ridge, there will be sufficient width for development of benches. A box cut shall be formed initially which shall be developed along the width of the reef by a trench cut. The bench height shall be maintained at 06m and a minimum width of 06m shall be maintained even in

abandoned benches. The width of the working bench shall be at least twice the height of the bench.

The slope of the working benches shall be maintained at 30^0. The haulage roads shall have a gradient of 1 in 20 to enable comfortable movement of traffic of dumpers.

The mining Pit is designed such that the height is about 06 m and the width is more than 06 m, maintaining 30° pit slope.

The Ultimate Pit Limit, so drawn on the basis of the field studies, exploration data and the updated geological mapping carried out so far in the area remains very tentative. However, based on the future exploration the defined, Ultimate Pit Limit is likely to change. The said Ultimate Pit Limit is demarcated on the Geological plan and enclosed as **Plate No. 3**. Drilling and blasting in this said mine to excavate / exploit the ore and waste, initially, it will be drilled and blasted. Hydraulic excavators will be deployed for removal/winning/excavation of the quartz and loading the same in tipper. For transportation 17 ton tippers will be used. For using the Heavy earth moving machineries necessary permission from DGMS under rule 106 (2) (b) will be obtained.

For the future development and production a systematic mine working is proposed for the First 5 years keeping the long benches and good width for the movement of the mining machineries and for transportation.

1. Method of Working: other than fully mechanized.
2. Bench Parameters: 06m Height, 06m Width and bench slopes 90^0 Maintained.
3. Bench height in OB/Ore: No top soil, Ore bench height is 06m.
4. Bench Width: 06m Width.
5. Bench Slop: Bench slope is maintained 90^0
6. Over all pit Slope: maintained 90^0
7. Bottom RL Proposed During Plan Period: 218M RL.
8. Grid reference of proposed working Location:

First Five Years	N-1686400 to N-1686700 E-309500 to E-309800

DRILLING EQUIPMENT:

For drilling in the formation DTH drills with 110 mm dia holes shall be used in conjunction with 400 Cfm air compressor operating at 10.5 Kgs / Cm^2 air pressure. The holes shall have spacing of 2.5M and a burden of 2.0 M.

They shall be drilled in one or two rows having a staggered formation. The holes shall be inclined at10 to 20° from the vertical. The depth of the holes shall be 06.5 M for a bench height of 6M. So as to cover the inclined distance and also provide for sub grade drilling. After blasting the above holes it is likely that we may get about 5-10%of boulders which need secondary drilling using jack hammers to drill 32 / 33 MM dia holes for this purposed or adopt plaster shooting.

BLASTING: It is proposed to adopt the following parameters

Burden and Spacing	:	2.5m × 2m
Depth of hole	:	Bench height 06m × 10% (sub grade drilling) =6.6 m taking 6.6m
Charge per hole	:	40 Kg / hole
Power factor as	:	7 tonnes / kg
Blasting pattern	:	Multi row blasting (2 or 3rows) with staggered pattern of drill and use of millisecond delay detonator
Maximum charge per delay	:	300 – 400 Kg

The maximum number of holes to be blasted in a round will depend upon the requirement of muck at site. Adopting a weekly blasting frequency, a blast round will comprise of 40 – 50 holes. V pattern sequence is proposed to be adopted initially for a two row blasting pattern. Necessary precautions will be adapted to safe guard against any danger likely to be for the adjoining village, roads, etc. Hoisting of red flags, posting of guard at strategic points, blowing of siren and other precautionary measures laid under MMR – 1961 and circulars issued by Director General of Mines Safety, Dhanbad will be followed.

PRECAUTIONS TO BE OBSERVED DURING DRILLING AND BLASTING:

DRILLING PRECAUTIONS:

Drilling with dust extractors. Use of sharp drill bits, delivery of compressed air at optimal pressure and proper maintenance of compressor and drilling machine.

Provision of ear plugs /ear muffs to drillers.

Blasting: Lessee has proposed to obtain a portable Magazine & ANFO mixing storage approval from Chief Controller of Explosives and concerned department as early as possible or we are approached licence dealers and given contract for blasting.

STORAGE OF EXPLOSIVES: At present no storage will be required. The drilling and blasting will be given for licensed agencies. In future lessee will apply for Storage, handling and use of explosives including ANFO. After getting the license the lessee will submit the license copy to concerned departments.

Precautionary Measures to be adopted at the time of Blasting Period:

- The employer shall permit only authorized and qualified persons to handle and use explosives.
- Smoking, firearms, matches, open flame lamps, and other fires, flame or heat producing devices and sparks shall be prohibited in or near explosive magazines or while explosives are being handled, transported or used.
- No person shall be allowed to handle or use explosives while under the influence of intoxicating liquors, narcotics, or other dangerous drugs.
- All explosives shall be accounted for at all times. Explosives not being used shall be kept in a locked magazine, unavailable to persons not authorized to handle them. The employer shall maintain an inventory and use record of all explosives. Appropriate authorities shall be notified of any loss, theft, or unauthorized entry into a magazine.
- No explosives or blasting agents shall be abandoned.
- No fire shall be fought where the fire is in imminent danger of contact with explosives. All employees shall be removed to a safe area and the fire area guarded against intruders.
- Original containers, or Class II magazines, shall be used for taking detonators and other explosives from storage magazines to the blasting area.
- When blasting is done in congested areas or in proximity to a structure, railway, or highway, or any other installation that may be damaged, the blaster shall take special precautions in the loading, delaying, initiation, and confinement of each blast with mats or other methods so as to control the throw of fragments, and thus prevent bodily injury to employees.
- Employees authorized to prepare explosive charges or conduct blasting operations shall use every reasonable precaution including, but not limited to, visual and audible warning signals, flags, or barricades, to ensure employee safety.

- Insofar as possible, blasting operations above ground shall be conducted between sunup and sundown.
- Due precautions shall be taken to prevent accidental discharge of electric blasting caps from current induced by radar, radio transmitters, lightning, adjacent power lines, dust storms, or other sources of extraneous electricity. These precautions shall include:
  - ✓ Detonators shall be short-circuited in holes which have been primed and shunted until wired into the blasting circuit.
  - ✓ The suspension of all blasting operations and removal of persons from the blasting area during the approach and progress of an electric storm.
  - ✓ The prominent display of adequate signs, warning against the use of mobile radio transmitters, on all roads within 1,000 feet of blasting operations. Whenever adherence to the 1,000-foot distance would create an operational handicap, a competent person shall be consulted to evaluate the particular situation, and alternative provisions may be made which are adequately designed to prevent any premature firing of electric blasting caps. A description of any such alternatives shall be reduced to writing and shall be certified as meeting the purposes of this subdivision by the competent person consulted. The description shall be maintained at the construction site during the duration of the work, and shall be available for inspection by representatives of the Secretary of Labor.

THE LIST OF MINING MACHINERY PROPOSED ALONG WITH PROJECTED OUTPUT FOR MACHINERY:

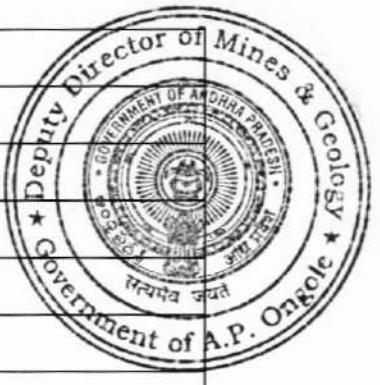
HYDRAULIC EXCAVATORS: The deployment of machinery is aimed at achieving the envisaged average production of **1,02,750** tons of Quartz and waste. The calculation is as follows:

Capacity of the bucket	2.0 cum
Bucket fill capacity	80 %
Bucket Density of material	2.5 t/cum
Tonnage handled per bucket	2.0 x 0.8 x 2.5= 4
Cycle time	35 sec
Expected operating efficiency	80 %
Number of loading cycles	$\frac{60 \times 60 \times 0.8}{35} = 82$

Tonnage handled by one excavator per hour	82 x 4 = 328 tons per hour say 325
Tonnage handled by one excavator per year of 300 working days in 8-hour shift a day	325x 8 x 300 = 7,80,000
Quantity of ore and waste to be transported in a year	**1,02,750 Tons**
Number of excavators required	**1,02,750**/7,80,000 = 0.13or say **1**
Proposed excavator	**One**

✓ HAULAGE AND TRANSPORT EQUIPMENT

TIPPER	
Cycle time per trip for loading	6.0 min
Spotting near loader	4.0 min
Haulage	5.0 min
Turning, Dumping and return journey	5.0 min
Total time	20.0 min
Expected operating efficiency	85 %
Number of trips per tipper/hour	(60 x 0.85)/20 = 2.55
Number of trips per tipper/year of 300 working days in 8 – hour shift load of tipper	2.55 x 8 x 300 = 6120
Capacity of tipper	17 Ton
Quantity of material transported in a year by one tipper	6120 x 17 = 1,04,040 t
Quantity of ore and waste to be transported in a year	**1,02,750Tons**
Number of tippers required	**1,02,750/1,04,040=0. 98 or say 2**



The above calculations show that 1 excavator and 02 tipper need to be deployed to achieve the envisaged production of 1,02,750Tons per year.

The mine is about 3.2km from Ekunampuram tar road movement of Quartz now lessee will develop that road by way of widen and fill the gravel the for better movement the Quartz different destinations. The list of mining machinery's is proposed at mines is given below:

1	Tippers	17 Tons	02
2	Wheel Loader**(if required)**	0.6cum	01
3	Hydraulic Excavator/rock breaker	2.0 cum	01
4	Compressors Tractor Mounted Compressor	124 cfm	01
5	Wagon Drills BVB 25	115 mm	01
6	Water Tanker (Drinking & Dust controlling)	5000 Litters	02

a) Year-Wise Tentative Excavation in Cubic Meters Indicating Development, ROM, Pit Wise:

Tentative excavation proposed to be carried out for the first five years is estimated ROM of **5,53,650Tons** of Quartz, Waste and Development will be mined out by forming benches of 6.0m each. The year-wise details are presented below.

1. In-situ Tentative Excavation

Year	Pit No.	Total tentative Excavation (Ton)	Top Soil (Ton)	Side Burden (Tons)	ROM (Tons)		Mineral reject	ROM/Waste Ratio
					Ore Tons	Mineral reject Tons		
1	2	3	4	5	6	7	8	9
I	1	1,10,070	Nil	7,320	92,475	10,275	Nil	0.90 : 0.10
II	1	1,10,490	Nil	7,740	92,475	10,275	Nil	0.90 : 0.10
III	1	1,10,370	Nil	7,620	92,475	10,275	Nil	0.90 : 0.10
IV	1	1,15,230	Nil	12,480	92,475	10,275	Nil	0.90 : 0.10
V	1	1,07,490	Nil	4,740	92,475	10,275	Nil	0.90 : 0.10
TOTAL		5,53,650	Nil	39,900	4,62,375	51,375	Nil	0.90 : 0.10
Average		1,10,730		7,980	92,475	10,275		

2. Dump Re Handling (for The Purpose of Recovery of Mineral):

10% intercalated waste is generated to the quantity of **51,375**Tons will be generated which will be dump over an area of **0.540Ha** in NW side of the Quarry Lease area as depicted on **Plate No-4**. And side burden developed a quantity of 39,900Tons, it is used for internal roads. The generated waste will be utilized to strengthen the internal roads of the quarry lease area.

(i) INDICATE YEAR WISE TENTIVE EXCAVATION IN CUBIC METERS INDICATING DEVELOPMENT, ROM, PIT WISE AS IN TABLE:

Systematic, Five year production & development program has been planned for CRMR Quartz Mine. The proposed Production calculation are as follows:

PROPOSED PRODUCTION						
Section	**Sectional area (Sq.m.)**	**Sectional Influence (m)**	**Volume (Cu.m.)**	**ROM @2.5t/cmt (tons)**	**Saleable Quartz 90% Tons**	**Waste in 10% in Tons**
1 st Year						
A-A'						
RL 230M-218M	685.00	60.0	41,100	1,02,750	92,475	10,275
Sub Total			**41,100**	**1,02,750**	**92,475**	**10,275**
2nd Year						
A-A'						
RL 230M-218M	685.00	60.0	41,100	1,02,750	92,475	10,275
Sub Total			**41,100**	**1,02,750**	**92,475**	**10,275**
3rd Year						
B-B'						
RL 230M-218M	685.00	60.0	41,100	1,02,750	92,475	10,275
Sub Total			**41,100**	**1,02,750**	**92,475**	**10,275**
4th Year						
B-B'						
RL 230M-218M	495.00	60.0	29,700	74,250	66,825	7,425
CC'						
RL 230M-218M	190.00	60.0	11,400	28,500	25,650	2,850
Sub Total			**41,100**	**1,02,750**	**92,475**	**10,275**
5th Year						
C-C'						
RL 230M-218M	685.00	60.0	41,100	1,02,750	92,475	10,275
Sub Total			**41,100**	**1,02,750**	**92,475**	**10,275**
Grand Total			**2,05,500**	**5,13,750**	**4,62,375**	**51,375**
AVARAGE PRODUCTION					92,475	10,275

Development			
Section	**Sectional area (Sq.m.)**	**Sectional Influence (m)**	**Volume (Cu.m.)**
1 st Year			
A-A'			
RL 230M-218M	**122.00**	**60.0**	**7,320**
Sub Total			**7,320**
2nd Year			
A-A'			
RL 230M-218M	**129.00**	**60.0**	**7,740**
Sub Total			**7,740**
3rd Year			
B-B'			
RL 230M-218M	**127.00**	**60.0**	**7,620**
Sub Total			**7,620**
4th Year			
B-B'			
RL 230M-218M	**93.00**	**60.0**	**5,580**
CC'			
RL 230M-218M	**115.00**	**60.0**	**6,900**
Sub Total			**12,480**

M/S. BALAJI MINERALS, MNG PTR: SRI. SAYYAD MASTHAN BASHA OVER AN EXTENT OF 9.390 HA.			
5th Year			
C-C'			
RL 230M-218M	79.00	60.0	4,740
Sub Total			4,740
Grand Total			39,900
Avarage			7,980

I- YEAR:

First year Proposed Production A-A' section on the top of the hill to down of the QL area, production between RL's 230 to 218.00m (**N-1686400 to N-1686600, E-309500 to E-309400)** by forming a 1 benches of 6m height and 6m width. About 1,10,070Tons of ROM will be excavated. Out of which a saleable Quartz of 92,475tons and an waste of 10,274tons will be produced, in the development of Quartz side burden will be developed an quantity of 7,320Tons. The waste generated will be dump on the North West side (**N-1686500 to N-1686700, E-309400 to E-309600)** of the QL area it is shown in **Plate no.4**.

II- YEAR:

Second year Proposed Production A-A' section on the top of the hill to down of the QL area, production between RL's 230 to 218.00m (**N-1686300 to N-1686600, E-309500 to E-309700)** by forming a 1 benches of 6m height and 6m width. About 1,10,490Tons of ROM will be excavated. Out of which a saleable Quartz of 92,475tons and an waste of 10,274tons will be produced, in the development of Quartz side burden will be developed an quantity of 7,740Tons. The waste generated will be dump on the North West side (**N-1686500 to N-1686700, E-309400 to E-309600)** of the QL area it is shown in **Plate no.4**.

III- YEAR:

Third year Proposed Production B-B' section on the top of the hill to down of the QL area, production between RL's 230 to 218.00m (**N-1686500 to N-1686700, E-309500 to E-309700)** by forming a 1 benches of 6m height and 6m width. About 1,10,370Tons of ROM will be excavated. Out of which a saleable Quartz of 92,475tons and an waste of 10,274tons will be produced, in the development of Quartz side burden will be developed an quantity of 7,620Tons. The waste generated will be dump on the North West side (**N-1686500 to N-1686700, E-309400 to E-309600)** of the QL area it is shown in **Plate no.4**.

IV- YEAR:

Forth year Proposed Production B-B' & C-C' sections on the top of the hill to down of the QL area, production between RL's 230 to 218.00m (**N-1686400 to N-1686700, E-309500 to E-309800)** by forming a 1 benches of 6m height and 6m width. About 1,15,230Tons of ROM will be excavated. Out of which a saleable

Quartz of 92,475tons and an waste of 10,274tons will be produced, in the development of Quartz side burden will be developed an quantity of 12,480Tons. The waste generated will be dump on the North West side (**N-1686500 to N-1686700, E-309400 to E-309600)** of the QL area it is shown in **Plate no.4**.

V- YEAR:

Forth year Proposed Production C-C' sections on the top of the hill to down of the QL area, production between RL's 230 to 218.00m (**N-1686400 to N-1686700, E-309500 to E-309800)** by forming a 1 benches of 6m height and 6m width. About 1,07,490Tons of ROM will be excavated. Out of which a saleable Quartz of 92,475tons and an waste of 10,274tons will be produced, in the development of Quartz side burden will be developed an quantity of 4,740Tons. The waste generated will be dump on the North West side (**N-1686500 to N-1686700, E-309400 to E-309600)** of the QL area it is shown in **Plate no.4**.

(iii) DUMP MANAGEMENT:

The total waste handling in the 5 years will be about 51,375Tons and Side burden generating in the formation of benches a quantity of 39,900Tons, this waste material will be used for haulage road remaining dumped at Excavated float ore area in North West corner around 0.574Ha(**N-1686500 to N-1686700, E-309400 to E-309600)**. At foot of the dumps retaining walls will be constructed to avoid wash off the waste material from lease area. The same dumps will be stabilized concurrent to mining operations. Check dams and gully plugs will be constructed in the foothills of nalahs.

Sl. No.	Details	Existing Land use (Ha.)	Additional requirement area during the plan period (Ha)	Land use at the end of the plan period
				(Ha.)
1	Area under mining	0.000	2.901	2.901
2	Overburden dump	0.000	0.574	0.574
3	Mineral storage/	0.000	0.264	0.264
4	Infrastructure	0.000	0.002	0.002
5	Roads	0.000	0.086	0.086
6	Green belt	0.000	0.685	0.685
	SUB- TOTAL	**0.000**		**4.512**
7	Virgin Area	8.040		3.528
	TOTAL	**8.040**		**8.040**
8	**Safety Zone Area**	**0.870**		**0.870**
TOTAL QUARRY LEASE AREA		**8.910**		**8.910**
Approach Road Area		**0.480**		**0.480**
Total Area		**9.390**		**9.390**

(iv) LAYOUT OF MINE WORKINGS, PITS, ROADS ETC :

Taking into consideration of geology and its structural attitudes, opencast method of mining is adopted whereas the mode of working by other than fully mechanized with hydraulic excavator. Since the mode of working is other than fully mechanized so the height of the bench is kept 06m max and the width of the bench will be kept more than the height with an overall bench slope of 90°.

The proposal for next 5 years Production programmer are clearly brought out in plans & sections enclosed vide **Plate No. 4 -4A.**

First Five Years	N-1686400 to N-1686700 E-309500 to E-309800

Proposed method of working:

- The method of working is opencast mechanized mining considering various technical parameters like surface topography, Availability of the deposit etc.
- It is proposed to work this deposit by adopting 6.0 m bench height and width of benches is maintained more than 6.0m.
- The ultimate pit slope will be maintained at 90° during the plan period and the same will be retrieved to 3.0m width during conceptual stage where the Ultimate pit slope will be increased to 93^{0}. This will enable us for better mineral recovery from the Blocked reserves. The benches shall be 6.0 m in height and the ramp gradient shall be kept minimum of 1 in 16.
- Systematic mine development and winning of Quartz is planned up to average depth of **12m** in this plan Period.
- Based on the disposition and the width of the Quartz, the ultimate pit limit is arrived accordingly.
- The mine is worked along the strike of Quartz in the SW- NE direction.
- Specific permission from Directorate of Mines safety will be obtained for working with heavy machinery for digging, excavation and removal of ore etc. under regulation 106.(2)(b) of Metalliferrous Mines Regulation 1961.
- Mining is going to be carried out using excavators after drilling and blasting.

Extraction of Quartz and the no waste generated except Mining loss and it's carried out by using drilling and blasting. Excavator is used for extraction and also for loading.

Layout of mine workings, pit road, the layout of faces and sites for disposal of overburden/waste:

The deposit is going to be worked by mechanized open cast mining by using Drilling and blasting associated with HEMM. Hence there is no change in the mining method. Production and Development has been explained same Chapter

Refer **Plate No-4-4A** for Year-wise production and Development Plans & sections.

Waste disposal:

- Sufficient care was taken while selecting the site for waste dump based on the economically feasibility and ultimate depth of mining.
- One waste dump located on the West side of the lease area will be utilized for dumping waste during the plan period.
- During the plan period West side corner of the lease will be utilized for dumping the waste generated from pit. The waste generated will be directly utilized for refilling once the ore exhausted in the pit.
- This area will not affect future mining as it is outside the ultimate pit limit.
- The waste dump area will be afforested once the dump stabilized.

(V) **CONCEPTUAL MINING PLAN:**

Total Geological resources estimated in the lease area is around **21,18,825 tons(8,47,530Cum).** The saleable reserves is about **20,09,441tons (8,03,776Cum)** are available in this applied area and the Average proposed production is **92,475tons(41,100Cum)** per year.

PARTICULARS	PROPOSED PRODUCTION	BALANCE RESERVES
Mineable Reserves		20,09,441 Tons(8,03,776Cum)
Mining Plan Period	4,62,375Tons/1,84,950Cum	15,47,066 Tons(6,18,826Cum)
First Scheme Period	4,62,375Tons/1,84,950Cum	10,84,691 Tons(4,33,876Cum)
Second Scheme Period	4,62,375Tons/1,84,950Cum	6,22,316 Tons(2,48,926um)
Third Scheme Period	4,62,375Tons/1,84,950Cum	1,59,941 Tons(63,976um)

a. Give broad description identifying potential area to be covered in the given time frame.

✓ Entire area is Potential and planned 5 five year **2.901Ha** remaining will be planned next 15 Years.

Sl. No.	Details	Existing Land use (Ha.)	Additional requirement area during the plan period (Ha)	Land use at the end of the plan period
				(Ha.)
1	Area under mining	0.000	2.901	2.901
2	Overburden dump	0.000	0.574	0.574
3	Mineral storage/	0.000	0.264	0.264

4	Infrastructure	0.000	0.002	0.002
5	Roads	0.000	0.086	0.086
6	Green belt	0.000	0.685	0.685
	SUB- TOTAL	**0.000**		**4.512**
7	Virgin Area	8.040		3.528
	TOTAL	**8.040**		**8.040**
8	**Safety Zone Area**	**0.870**		**0.870**
TOTAL QUARRY LEASE AREA		**8.910**		**8.910**
Approach Road Area		**0.480**		**0.480**
Total Area		**9.390**		**9.390**

- ✓ Whether site(s) for disposal of waste rock and un-saleable ores has/have been examined for adequacy of land and suitability of long term use in the event of continuation of mining activity.
- ✓ Quartz not required for Waste Rock & Un-saleable ore because of 10% Waste will be generate except Mining Lose and 51,375tons inter calculated waste be dumped on NW corner and used for road formation and plantation purpose.

b. Whether backfilling of pit(s) after recovery of ore/mineral up to techno economically feasible depth envisaged. If so, described broad features of the proposal.

- ✓ In Quartz no waste will be generated, hence we will be not planned any backfilling in this plan period.

c. Post mining land use envisaged.

- ✓ Pits will be used for Rain water Storage once mineral will be existing.

The expected life of the mine is **21.73years**. However, **the life of the mine may change based on the further exploration during the course of mining.**

During the ensuing plan period proposal of Drilling is required because entail reserves are available as out crop.

About 1 to 4 scheme periods are expected to come across within the life of the mine. The conceptual plan and sections showing the conceptual mining plan activity of the lease area (refer **Plate No-6-6A**).

(b) <u>UNDERGROUND MINING</u>:

Not applicable as it is open cast mining.

3. MINE DRAINAGE:

a) MINIMUM AND MAXIMUM DEPTH OF WATER TABLE BASED ON OBSERVATION FROM NEAR BY WELL AND WATER BODIES:

The rain water is very scanty in this area so no elaborate arrangements for drainage of rain water is required. There is no chance of encountering underground sources as the underground water table is encountered at 60m depth (based on the surrounding bore well). The water occurring in the mine due to rains will be automatically flow on slope sides.

b) INDICATE MAXIMUM AND MINIMUM DEPTH OF WORKINGS:

The maximum working RL is 230m and minimum working RL is 216m. Present Plan period workings will be reached RL 218m.

c) QUANTITY AND QUALITY OF WATER LIKELY TO BE ENCOUNTERED, THE PUMPING ARRANGMENTS AND PLACES WHERE THE MINE WATER IS FINALLY PROPOSED TO BE DISCHARGED:

Not applicable as the mining area is hill, so no water will be generated.

4. STOCKING OF MINERAL REJECT/SUB GRADE MATERIAL AND DISPOSAL OF WASTE:

The total waste handling in the 5 years will be about 51,375Tons and Side Burden waste is generated about 39,900Tons. The waste material will used for haulage roads and remains dumped in float worked out area on the NW corner around 0.574Ha. At foot of the dumps retaining walls will be constructed to avoid wash off the waste material from lease area. The same dumps will be stabilized concurrent to mining operations. Check dams and gully plugs will be constructed in the foothills of nalahs. The land chosen for disposal of waste material is shown Land use plan enclosed vide **Plate No 5**. In my future this dumb will be used when it is economically viable.

5. USE OF MINERAL AND MINERAL REJECT:

The Quartz can be exported or marketed in the domestic applications as lumps. The analysis reports of the Quartz reveal SiO_2 as 99.2%. Now there is very good market for B grade quartz, so the lessee wishes to supply the material to various industries like Glass, Steel, Alloys and silicon carbide Industries.

Further the lessee has conducted various tests for use Quartz in infrastructure industry for the manufacture of dry mortar and has found that, it is one of the best alternatives for use as construction sand as an alternative to river sand which is very scarce in this part of the state and the neighboring state. The soiled quartz

and the weathered quartz can be put to use in infrastructure industry. The fine powder generated can be disposed for the manufacture of sodium silicate.

6. PROCESSING OF ROM AND MINERAL REJECT:

There is no any mechanical and chemical means of mineral beneficiation in this mine and total ROM will be sent to Plant & Other Industries.

7. OTHERS:

Site Services:

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. Drinking water will be supplied to the workers from the bore well opened in the adjacent agriculture field.

Manager's Room

Rest Room

Toilets

First Aid - Provision is made in the Manager's Room

Drinking Water - Provision is made in the Rest Room

Site services have been depicted on relevant plates.

a) Employment Potential:

a. Highly skilled -	Mines Manager and Mine Formen	-	2
b.	Mine Supervisor	-	1
c. Skilled & Semi-skilled			
	Bore Compressor Operators	-	1
	Bore Compressor Assistants	-	1
	Excavator Operator	-	1
	Excavator Backhoe Assistants	-	1
	Tripper Drivers and Assistants	-	4
	Helpers	-	4
Total personnel in Mining Operations		-	15

b) Safety Gears:

- ✓ Pre-Employment Health Check-up for all New Employees
- ✓ Periodical Health Check-up for all Employees
- ✓ First Aid Box at Site, with trained First Aiders
- ✓ Providing Sufficient and Fit-To-Wear PPE (like Helmets, Mask, Safety Shoes etc.) for all Employees, working in the Quarrying Activity.

PART-B

ENVIRONMENTAL MANAGEMENT PLAN

8.1 ENVIRONMENTAL BASE LINE INFORMATION:

EXIISTING LAND USE PATTERN : **LOI TO BE ISSUED.**

Sl. No.	Details	Existing Land use (Ha.)	Additional requirement area during the plan period (Ha)	Land use at the end of the plan period
				(Ha.)
1	Area under mining	0.000	2.901	2.901
2	Overburden dump	0.000	0.574	0.574
3	Mineral storage/	0.000	0.264	0.264
4	Infrastructure	0.000	0.002	0.002
5	Roads	0.000	0.086	0.086
6	Green belt	0.000	0.685	0.685
	SUB- TOTAL	**0.000**		**4.512**
7	Virgin Area	8.040		3.528
	TOTAL	**8.040**		**8.040**
8	**Safety Zone Area**	**0.870**		**0.870**
TOTAL QUARRY LEASE AREA		**8.910**		**8.910**
Approach Road Area		**0.480**		**0.480**
Total Area		**9.390**		**9.390**

WATER REGIME:

No perennial water source is passing through the area. From the natural slopes the rainwater drains into the stream which joins the main drainage system. Maximum water table is about 50m depth. The water table is much below the proposed working depth and the mining operations will not affect the water regime.

HUMAN SETTLEMENTS:

Within the QL area there are no villages or human settlements. There is no question of any evacuation or resettlement of people elsewhere. Workers come from village, which are more than 1.00 Km away. Within the 5KM buffer zone there are 21 villages and their populations are given below:

Sy.no	Village names	Direction	Distance	Populatation
1	Ekunampuram	S	3.6KM	1100
2	Harivemula	SE	4.1KM	750
3	Boyamadugula	SW	4.5KM	368
4	Cherlapalle	SW	4.1KM	935

www.census2011.co.in

PUBLIC BUILDINGS, PLACES OF WORKSHIP AND MONUMENTS:

There are no buildings and monuments of historic importance within the QL area.

SANCTUARIES: There is no sanctuary near by the lease hold area.

ECO-SENSITIVE AREA ETC:

There are no Eco-sensitive areas near by the lease hold area.

8.2. IMPACT ASSESSMENT:

(a) LAND AREA:

Sl. No.	Details	Existing Land use (Ha.)	Additional requirement area during the plan period (Ha)	Land use at the end of the plan period
				(Ha.)
1	Area under mining	0.000	2.901	2.901
2	Overburden dump	0.000	0.574	0.574
3	Mineral storage/	0.000	0.264	0.264
4	Infrastructure	0.000	0.002	0.002
5	Roads	0.000	0.086	0.086
6	Green belt	0.000	0.685	0.685
	SUB- TOTAL	**0.000**		**4.512**
7	Virgin Area	8.040		3.528
	TOTAL	**8.040**		**8.040**
8	**Safety Zone Area**	**0.870**		**0.870**
TOTAL QUARRY LEASE AREA		**8.910**		**8.910**
Approach Road Area		**0.480**		**0.480**
Total Area		**9.390**		**9.390**

(b) AIR QUALITY:

In general Mining activity contributes to pollution of air due to working of mining equipment transportation, and etc., since the mine is proposed to work by fully mechanized means, there is no pollution to the air.

(c) WATER QUALITY:

Except a seasonal watercourse in the lease area, there is no perennial river /nallahs or springs are present in the area. Natural valleys drain the rainwater. As water table is at a very low depth there is no water pollution due to discharge of water during monsoon. To check the erosion and prevent silt being carried during monsoon period, a series of gully checks would constructed at regular intervals

(d) NOISE LEVELS:

Noise pollution in mining area is mainly due to noise generation from the moving of machinery. Noise is defined as any sound that can produce an undesired physiological effect in an individual. Since this mine is worked by means of fully mechanized the noise levels are monitored as per the norms laid down by the governing agencies.

(e) VIBRATION LEVELS (DUE TO BLASTING):

Mining activity also generates ground vibrations during the blasting. Ground vibration, fly rock, air blast, noise, dust and fumes are the deleterious effects of

blasting on environment. The explosive energy sets up a seismic wave in the ground, which can cause significant damage to structures and disturbance to human occupants. It causes major damages to the pit configuration too. By adopting controlled blasting, the above said problems were greatly minimized. The impact is also minimized by choosing proper detonating system and optimizing total charge and charge/delay.

(f) WATER REGIME:

There are no perennial surface water bodies with-in the lease area. However, seasonal nallahs existing flowing towards northern and southern direction. However lessee will construct the Check dam and gully checks outside the lease area to avoid the erosion. In this deposit, as the mineral or overburden does not contain any harmful ingredients that could leach down to the water table hence there is no pollution of ground water.

(g) ACID MINE DRAINAGE: Not applicable

(i) SURFACE SUBSIDENCE: Not applicable

(j) SOCIO-ECONOMICS:

There are 4villages falling within the buffer zone with a total population of people. They all depend upon agriculture. There will be no adverse effect on their socio-economic environment. Besides, mining gives additional income to the labourers.

(k) HISTROCIAL MONUMENTS ETC:

There is no historical monument or historic importance places with in the QL area.

(l) BIO-DIVERSITY:

The Natural plantation in the QL area is only small bushes with thorny type only. Lease area is covered by Quartz float/ Quartz reef/Granite.

The item-wise compliance position and proposals for First five years Plan period are briefly discussed below;

Items/Particulars	Proposals for the next five years Plan period
1	2
Top-soil storage, preservation and utilization	Not available soil.
Land reclamation and rehabilitation	This is a fresh area and there are no any proposals of land reclamation and rehabilitation during the first five year plan period.
Waste Dump	During the plan period about **51,375tons** of intercalated

<table>
<tr><td>Management</td><td colspan="3">waste will be generated and this will be dumped towards NW side of the lease area covering an extent of 0.574Ha. with 06m height.</td></tr>
<tr><td rowspan="7">Afforestation programme with precautions proposed for survival & protection of plantation.</td><td colspan="3">Proposal of afforestation for Plan period is given below:</td></tr>
<tr><td>Year</td><td>Plants</td><td>Area (Ha.)</td></tr>
<tr><td>I - YEAR</td><td>50</td><td rowspan="5">0.685</td></tr>
<tr><td>II - YEAR</td><td>50</td></tr>
<tr><td>III-YEAR</td><td>50</td></tr>
<tr><td>IV-YEAR</td><td>50</td></tr>
<tr><td>V-YEAR</td><td>50</td></tr>
<tr><td colspan="3">It is proposed to plant the local species like Temarind, Emblica, Cassia, Neem, Honne etc. on inactive slopes of the dumps. Precautions proposed for survival and protection are watering the afforested area and providing watch ward. The plants are planrted at the 7.5M Buffer Zone. Survival rate is expected to be about 10-20%.</td></tr>
<tr><td>Quality of air</td><td colspan="3">It is proposed to spray water on roads, construction of well-designed haulage roads with side drains, green-belt along the lease boundary. Over loading of tippers will be avoided and ore loaded tippers will be covered with tarpaulin.</td></tr>
<tr><td>Quality & make of water including surface &ground water</td><td colspan="3">Additional retaining walls, filter bunds, settling pits will be made. Whenever necessary, lime will be added to allow faster precipitation of suspended solids. All water courses, settling pits will be detailed every year before onset of monsoon. Quality of water will be monitored season-wise.</td></tr>
<tr><td>Noise Level-sources of noise to be identified</td><td colspan="3">Proper lubrication, fitting of effective silencers and good maintenance of all equipment's will be carried-out to minimize noise levels. Afforestation as proposed will also act as acoustic barrier.</td></tr>
<tr><td>Vibration-pattern of blast holes & design of blast with details of sufficient number of experimental blasts conducted</td><td colspan="3">It is proposed to continue same method of drilling and blasting.</td></tr>
<tr><td>Treatment of mine water & affluent/ toxic substances before</td><td colspan="3">Not required</td></tr>
</table>

discharge	

8.3 MINED-OUT LAND:

An effective programme of land restoration are drawn and implemented to bring back the status to as near the pre-mining conditions as possible. The salient features are as enumerated below. A green belt development area planned meticulously. It is proposed to reclaim all the worked out area by suitable soil conservation and afforestation methods. This operation carried out concurrent to mining during the next scheme period. The roads shall have avenue trees and thus a green belt developed. Land degradation will take place by dumping of waste, and the reclamation of this dumping area shall also be included in the programme. It is always necessary to keep the area under disturbance at any stage to the minimum possible. This can be achieved by ensuring reclamation of the excavated area simultaneously with mining activities by reducing the gap between reclamation and excavation to the minimum.

8.4. TOPSOIL MANAGEMENT :

Wherever the topsoil is encountered is very negligible However it will be selectively removed, stacked separately. It will be used to spread over the dumps and back filled area for afforestation or shall be used during regular afforestation programme.

8.5. TAILINGS DAM MANAGEMENT:

Not applicable, because in the lease area there are no tailing dams, however the lessee has proposed to construct some check dams outside the lease area.

PART-C

PROGRESSIVE MINE CLOSURE PLAN:

Progressive Mine closure plan is enclosed as **Plate No-7.**

9.0 PROGRESSIVE RECLAMATION PLAN:

9.1.1 Mined-Out Land:

The mineral reserve exist far deeper than the UPL of this plan period and mining will continue for the rest of the lease grant period.

The total area put to use for various mining and associated activities are as follows.

Sl. No.	Details	Existing Land use (Ha.)	Additional requirement area during the plan period (Ha)	Land use at the end of the plan period
				(Ha.)
1	Area under mining	0.000	2.901	2.901
2	Overburden dump	0.000	0.574	0.574
3	Mineral storage/	0.000	0.264	0.264
4	Infrastructure	0.000	0.002	0.002
5	Roads	0.000	0.086	0.086
6	Green belt	0.000	0.685	0.685
	SUB- TOTAL	**0.000**		**4.512**
7	Virgin Area	8.040		3.528
	TOTAL	**8.040**		**8.040**
8	**Safety Zone Area**	**0.870**		**0.870**
TOTAL QUARRY LEASE AREA		**8.910**		**8.910**
Approach Road Area		**0.480**		**0.480**
Total Area		**9.390**		**9.390**

9.1.2 Topsoil Management:

No topsoil is present in parts of the lease area. A volume of 39,900 Tons of side burden is generated in the development of benches, it will be dumped at North & West Side of the Quarry Lease area as a barrier and supporter of plantation

9.1.3. Water Quality Management:

The following preventive measures were proposed for minimizing adverse effects on water regime;

- Along all discharge points leaving the mining lease, into the surrounding area, suitable number of filter walls of 2m x 1.5m of sufficient length will be erected across the flow, at intervals, all along the length of flow to prevent suspended solids entering the surrounding streams/drains/water courses, to confine the discharge water quality to the permissible limits.

- Regular monitoring will be carried-out and further remedial steps as may be necessary will be taken.
- Whenever necessary, lime will be added to allow faster precipitation of suspended solids.
- All water courses, settling pits, etc., will be de-silted every year before onset of monsoon.

Hydrological Study:

The workings are reached up to 200m RL and during the conceptual stage the pit depth may reach up to 218m RL. Water table in the area is about 100-120m RL hence, the proposed workings will not intersect the ground water table and Hydrological Study is not proposed.

9.1.4 Air Quality Management:

The following preventive measures were planned for air quality management,

- Water spraying on roads & working places will be carried-out, at regular intervals to control the air borne dust.
- Sharp drill bits will be used and wet drilling will be practiced.
- Controlled blasting will be carried-out using ms delay detonators.
- Loading & speeding of trucks will be controlled to prevent spillage on the way.
- Ore carrying trucks will be covered with tarpaulins to prevent spillage & flying of ore fines due to wind velocity enrooted.
- Haul roads and service roads will be graded regularly to clear accumulation of any loose material.
- Monitoring of air quality regularly to take necessary steps to keep the polluting constituents within the permissible limits.

9.1.4(a) Waste Management:

1. **Type of overburden/mineral rejects:**
   Intercalated Waste is generated.
2. **Quality:** The quality of ore and waste is non-toxic.
3. **Quantity:** The ore to waste ratio during the Plan period is 1:0.20i.e., for Avg. production of **92,475tons/annum** about **10,275tons/annum** waste shall be handled on average.
4. **Disposal practice:** Initially the waste generated will be dumped Specific area in lease area. Dump parameters & other protective measures were will be initiate.

9.1.5 Tailing Dam Management:

Not applicable.

9.1.6 Infrastructure:

The mine is well connected to the district and taluka headquarters by metalled roads and State Highways. The approach road is good and approachable in all seasons. Mine is equipped with office, stores, first aid service, garage, canteen, weighbridge, rest shelter etc.

Their future utilization will be evaluated, before such closure is planned and measures will be taken for their physical stability and maintenance. Dismantling & disposal will be thought of & taken before final closure.

The statutory buildings will be given to the Local Panchayat, if they want to maintain, otherwise dismantled and debris will be removed and plantation will be carried-out. The approach roads also will be subjected to plantation. These works will be completed tentatively with-in one year after cessation of mining operations.

9.1.7 Disposal of Mining Machinery:

There is no proposal for disposal of mining machinery at present. However, if required, the machinery will be disposed-off by selling and new machineries will be purchased. The final decommission of mining machinery and their possible post mining utilization will be given in the final mine closure plan to be submitted one year before the intending date of final closure.

9.2 Safety & Security:

Before any closure, for any reason what so ever, arrangements will be made,

a) To fence-off the access to pits & other dangerous areas/plant etc. for men & animals.
b) To post watch & ward, where such effective blocking is not possible.
c) Periodical inspection will be conducted to make sure of the arrangements in their proper place & their effectiveness.

The visitors will be allowed to enter the lease area only with prior permission from relevant authority. The detailed arrangements proposed during the mine abandonment and upto the site being opened for general public will be given in final mine closure plan to be given one year in advance from the date of the intended mine closure.

9.3 Acid Mine Drainage and Mitigation Measures:

No chemicals are involved in the extraction or processing of the ore, hence there is no danger of acid mine drainage.

9.4 Surface Subsidence Mitigation Measures: The ground surface in around the lease area is covered by Granites of Archaean Basements complex the ground is stable. Internal roads are well compacted to avoid any skidding of vehicles. The benches and ramp ways will be well built and maintained to avoid any kind of subsidence or skidding.

9.5 Afforestation:

Each year some part of the barrier zone will be subjected to afforestation and care will be taken to protect the saplings. The table below shows the proposed afforestation plan.

Programme of Afforestation

YEAR	Name of the Plant	No of Plants	Area Spacing	Area Covered In Ha
I	Eucalyptus & Neem & other local species	50	3x3 m	
II	Eucalyptus & Neem & other local species	50	3X2 m	
III	Eucalyptus & Neem Ficusbengalensis& other local species	50	3x3 m	**0.685Ha**
IV	Ficusbengalensisn& other local species	50	3X3 m	
V	Ficusbengalensisn & other local species	50	3X3 m	
Total		**250**		**0.685Ha**

Costing of plant : 30 Rs each

For maintains per piece : 100Rs

Total Budget : **1.350 Lakhs per Year.**

9.6 DISASTER MANAGEMENT AND RISK ASSESSMENT:

Lease area is located at a distance of 3.60 Kms from Eknapuram village, a Mandal Headquarters, A primary health centre and a Police station is located at Chandrasekharapuram. Hospital at Chandrasekharapuram & Giddalur. is capable of providing first aid and providing lifesaving drugs. Further, it has the facility for safe transport of victims to Speciality Hospitals in Giddalur & Kanigiri. There is a fire station available at Chandrasekharapuram, which is at a distance of 12.8kms from the lease area.

Details	Name	Distance In KM
Nearest Village	Ecknapuram	3.600
Nearest Mandal	Chandrasekharapuram	12.8
Nearest Hospital	Chandrasekharapuram	12.8
Nearest Police Station	Chandrasekharapuram	12.8
Nearest Fire Station	Chandrasekharapuram	12.8
Nearest Railway station	Giddalur	35.28

Nearest Airport	Kadapa	93.30
Nearest Sea Port	Nellore Krishnapatnam Port	146.12

Remaining all thing Managing Partner will take care Sri. Sayyad. Masthan Basha, Cell No: +91 97054 22884.

RISK ASSESSMENT:

Quartz is extracted by other than fully mechanized open cast mining method risk of disasters is discussed below.

No high risk accidents are anticipated as it is small scale other than fully mechanized mining with essential light machinery. The area is not prone for landslides, seismic activities, subsidence, floods, inundation etc. As there are no rivers and habitation in the vicinity of probable disaster from the lease area. The Granite is competent rock so no sliding or fall is anticipated.

However, in case of any eventuality, a model disaster management plan is given below.

A MODEL DISASTER MANAGEMENT PLAN:

The Lessee has formulated the disaster Management plan keeping all eventualities in mind

Disaster Management is the art of functioning under conditions of extreme difficulty. It is the ability to take cool rational decisions in a crisis situation filled with tension and even danger. It is the ability to function effectively when all known chains of command have been broken and when even channels of communication have failed. In short, it is the ability to function in chaos. It is in this situation that cool and clear thinking is necessary and decisions have to be taken quickly and effectively. Reflex time factor, efficient use of resources, return back to normalcy are all required and above all not to aggravate damage. It is a situation where blame game is high and tempers flare. In short a totally hostile atmosphere. In mine major accidents like Roof collapse, pillar failures. Fire inundation due to breach or heavy rainfall, breach of dam, tank bund etc. in the upper stream could turn to be a disaster.

1. OBJECTIVES:

The main objectives to be ensured

I Save lives and alleviate suffering

II Protect property

III Ascertain the cause of the accident

IV Restore normalcy

V Install a sense of security and confidence in the minds of the affected people.

2. RESOURCES OF ALL DEPARTMENTS TO BE MADE AVAILABLE:

The Lessee will be monitoring the total execution of the disaster management plan. The resources of all departments including men and material shall be promptly made available. Every facility must be afforded to the Civil police, Medical officers.

Sri. Sayyad. Masthan Basha,

Cell No: +91 97054 22884.

3. IMPORTANT RESPONSIBILITIES OF OFFICIALS PRESENT AT SITE:

The persons involved in the chain of action are

I. Mine Foreman& Mine Mate.

II. Mine Manager

III. Mine Agent/owner.

Mine Foreman:

The mine Foreman who is the In-charge at site, on observation/hearing the news of any disaster in his jurisdiction shall inform the mine manager immediately. He shall ensure at the site of disaster the necessary first aid to the injured. He shall withdraw the entire workman from the site by suspending all operations. Till such time relief and assistance arrive and a more senior official replaces him. He shall take charge of the situation. He shall not disturb the site of disaster except for saving the personnel.

He shall ensure that the accident has been reported properly to the Mine manager who is said to be the controller

Mine Manager:

On getting the information from the site in-charge (Foreman), he shall immediately pass on the information correctly to the agent / owner and shall follow the actions referred below:

(i) collect volunteers,

(ii) allot duties to each as best as possible under the prevailing circumstances,

(iii)allot duties to security staff to control the situation

(iv)Organise relief with the assistance of volunteers.

(v) Manger/Officer-in-charge present during an accident shall take note of the exact time of the accident, besides other important details connected with the accident.

(vi)The following lists shall be made available at mines (along with current telephone numbers wherever provided):

A) List of firefighting arrangements

B) List of ambulance services with location

C) List of volunteer organizations

D) Rotary Club, etc.

E) List of Civil, Police and other authorities to be informed in case of an accident

F) List of firefighting arrangements

G) List of mobile crane operators (Government, Public Sector, and Private Sector).

H) List of mines, contacts, facility available nearby

I) List of first aiders and contacts.

J) List of Transport bus depots.

K) District Magistrates, District Superintendents of Police.

L) Heads of Private and Public Sector organizations located in the Division from whom assistance can be sought

M) Road Maps of the Division.

N) List of Officers of DGMS to be informed in case of serious accidents Concerned DGMS officers concerned is displayed at the mine head.

O) Official in charge of accident site:

Mine manager is the official–in-charge of accident site and who is present at the site of the accident shall be the overall In charge of relief operations and all the staff shall comply with his Instructions.

Particulars to be conveyed by official at the site of accident while conveying first information:

vii) The information should be precise and clear. The Time and date of accident.

Brief description of accident/nature of accident.

Whether any injury, number of persons injured/killed.

Prima facie cause, if known:

viii) Speedy transport of injured persons to hospital:

After receiving first aid, all seriously injured persons will be transported, as speedily as possible to the hospital station as decided by the Medical Officer in charge appointed.

ix) Arrangements for reception of patients at hospitals

A) Timely advice will be given to the civil hospital of the number of injured persons proposed to be shifted there and the time that they are expected to arrive at the hospital station.

B) Ambulances or suitable road vehicles shall also be requisitioned from the hospital station. If adequate transport cannot be arranged for by such means, transport will be hired from **Chandrasekharapuram** Mandal Head-quarters which is at 12.80kms from the mine.

Examination of evidence and preservation of clues:

x) Mine Manager, who may happen to be present at the time an accident occurs or who first arrives at the scene of accident shall carefully examine and make a note of all the evidence which may prove useful in ascertaining the cause of the accident and record the results of the examination.

In the event of more than one Officer or senior subordinate being present at the site of the accident or arriving first at the site of the accident, the report shall be signed by all the Officers.

Owner/Agent:

On receipt of the information about the disasters or incident the owner or an agent is his absence shall reach the site immediately and take the control of the entire situation and perform/observe the following in a manner of sequence as given below:

Sri. Sayyad. Masthan Basha is the Managing Partner of the Quarry Lease Applied Area, Is also considered as the owner, Depending on the gravity of the situation will establish direct contacts with civil and police authorities.

Information to Civil and police authorities: Depending on the gravity of the situation establish direct contact with Civil and Police authorities such as District Collector, District Superintendent of Police, and Superintendent of Police apart from conveying the information to the nearest Police Station.

The mine owner shall consider the following while performing his responsibility:

i) Preservation of clues:

All clues shall be preserved with a view to enabling the reconstruction of the scene at a later date. This is essential even though the District Magistrate or the police might have inspected the scene of the accident and ascertains the cause of the accident and even though photographs might have been taken do not interfere with any clue which may be of assistance in arriving at the cause of the accident and any item of debris which may help to trace the cause of the accident unless such interference is emergent and unavoidable and is permitted. If it is considered absolutely necessary to remove any items of debris, which may help to trace the cause of the accident, they shall be carefully preserved. Record being kept of the positions from which they were taken. Video graph and photographs of the wreckage shall be taken, as their value for purposes of evidence is very great. It may happen that parts of the wreckage will afford the only clue to the cause of an accident.

ii) RECORDING OF STATEMENTS OF STAFF CONCERNED:

Record the statements of the staff concerned and take whatever steps as may be necessary to record or preserve evidence, which subsequently might not be available.

iii) NO TAMPERING OF CLUES AND EVIDENCE:

None shall interfere with any clue which may be of assistance in arriving at the cause of the accident and any item of debris which may help to trace the cause of the accident shall not be disturbed or cleared unless such interference is emergent and unavoidable and is permitted by a responsible Officer present at the spot. If it is considered absolutely necessary to remove any items of debris, which may help to trace the cause of the accident, they shall be carefully preserved by the Officer permitting the removal, record being kept of the positions from which they were taken. Photographs and video graph of the wreckage shall be taken, as their value for purposes of evidence is very great. It may happen that parts of the wreckage will afford the only clue to the cause of an accident, the position and the state of the road etc.

iv) ARRANGING VIDEOGRAPHERS AND PHOTOGRAPHERS:

Senior officer shall make the arrangements for photographs and video graphs.

v) A SHORT NOTE ON CRISIS MANAGEMENT

Crisis leadership involves five critical tasks described below

a) Sense making, considered as the classical situation assessment step.
b) Decision making.
c) Meaning making–refers to crisis management as political communication.
d) Terminating a crisis is only possible if the public leader correctly handles the accountability question.
e) Learning, refers to the actual learning from a crisis is limited.

vi) A crisis often opens a window of opportunity for reform for better or for worse.

vii) Examples of organizational crises

a. Extortion
b. Bribery
c. Hostile Takeover
d. Terrorist Attack
e. Vehicular fatality
f. Information
g. Product tampering

h. Workplace bombing
i. Natural disaster that disrupts organizational office
j. Computer tampering
k. Natural disaster that disrupts product/service.
l. Confidential data loss
m. Kidnapping
n. Product/service
o. Boycott
p. Work-related homicide
q. Malicious rumour
r. Hazardous material leak
s. Plant explosion
t. Personnel assault
u. Assault of customers
v. Product recall
w. Counterfeiting
x. Natural disaster that destroys corporate headquarters
y. Natural disaster that eliminates key stakeholder

viii) Crisis Management becomes pertinent when the pre-conceived Emergency plan finds a deviation from the expected route.

ix) For such eventualities "what if" analysis is to identify and prepare plans for all the other crises that could happen as a result of the first one. Usually, this exercise is best accomplished in a group brainstorming session. It might sound something like this.

"A blast was initiated. Everything went off as planned, except for the exhaust fan was stopped due to power interruption after the blast and reverse ventilation started. Inadvertently the Mate travelling in downcast shaft got affected by the blast fumes and got suffocation. So no one thought there was a cause for alarm."

Work progressed as normal, and the power interruption has caused damage, and possible damage as a result of the power interruption. What if reverse ventilation takes place? What if the Mate collapses? What if the Mate is killed? What if friends and relatives of the affected make statements critical of our company? What if law suits are filed claiming negligence? Similarly in opencast mines particularly while doing blasting operations.

x) All the above are referred to a 'spin-off crises', and have more detrimental effects than the initial crises. One of the many advantages to crises-management planning is to anticipate what could go wrong, so you can break the sequence of events and redirect them. If you try to complete this exercise while the crises is in progress, your thing may not be clear, your actions too late, and the outcome will be out of your control.

xi) Crisis Impact Analysis the next step is to look at each crisis, and determine which of your audience would be affected. The word audience is defined as anyone who can have an effect on your reputation, the media, political leaders, employees and their families, community leaders, customers, banks, suppliers, shareholders, and investors.

xii) SHORT NOTE FAULT TREE ANALYSIS

a) Fault tree analysis is a logical, structured process that can help identify potential causes of system failure before the failures actually occur. Fault trees are powerful design tools that can help ensure that product performance objectives are met.

b) Fault Tree analysis is one of the most widely-used methods in system reliability analysis. It is a deductive procedure for determining the various combinations of failures, and human errors that could result in the occurrence of specified undesired events

c) A fault tree analysis (FTA) is a deductive, top-down method of analysing system design and performance. It involves specifying a top event to analyse (such as a fire), followed by identifying all of the associated elements in the system that could cause that top event to occur.

d) Fault trees provide a convenient symbolic representation of the combination of events resulting in the occurrence of the top event.

e) FTA can be used as a valuable design tool, can identify potential accidents, and can eliminate costly design changes. It can also be used as a diagnostic tool, predicting the most likely system failure in a system breakdown.

f) FTA is a method of analysing the causes of hazards. FTAs use Boolean logic (gates) to describe combinations of individual faults that can create a hazardous event. Each level of the tree lists the lower level events that are necessary to cause the event shown in the level above it.

g) Often the most difficult part of creating a fault tree is the determination of the top level event. The selection of the top event is crucial since hazards in the

system will not be comprehensive unless the fault trees are drawn for all significant top level events.

h) Once the top event has been defined, the next step is to determine the events related to the top event and the logical relations between them, using logic symbols to define the relations. The most frequently used symbols for fault trees are AND and OR gates.

i) The output of an 'AND gate' only exists if all the input events exist.

j) The output of an 'OR gate' exists provided at least one on the input events exist.

k) The relationships between the events shown in a fault tree are standard

l) Logical relations and can therefore be expressed using any form of Boolean algebra of truth table. The tree format, however, seems to have the advantage in readability

m) Fault trees can help identify scenarios leading to hazards and can suggest possibilities for hazard elimination or control.

n) Fault tree analysis is also the tool for discovering product failure, engineering failure and the common human error causes.

xiii) Major elements in fault tree analysis:

1. Quantification
2. Risk ranking
3. Selecting the "Important Few" and ignoring the "Unimportant Many"
4. Follow the "Path of the Greatest Resistance"
5. The importance of identifying the common cause events.

xiv) Fault Tree Analysis in 7 Steps

a) Select a top level event for analysis. Try to be specific, for example, "Email server down for more than 4 hours." Sources of top level events include:

b) Problem/Known Error Records; service outage analysis; potential failures from brainstorming; and "what-if' scenarios based on service level agreements, etc.

c) Identify faults that could lead to the top level event. Continuing the above example, some possible faults leading to an outage lasting more than four hours might be "loss of power", another might be "hardware failure." List all the faults under the top level event in boxes and connect the fault boxes to the top level event box by drawing lines.

d) For each fault, list as many causes as possible in boxes below the related fault. Continuing the example above, in the case of "loss of power," some causes might

be "electrical outage," "power supply failure," and so on. Connect the boxes to the appropriate fault box.

e) Draw a diagram of the "fault tree." Two logic operators - 'and' and 'or', also known as logic gates are used to represent the sequencing of faults and causes. For example, Email server down for more than 4 hours" could be caused by "loss of power" or "hardware fault." Another might be "loss of building power" and "battery backup exhausted."

Update faults and causes by grouping logically related items using 'and' or 'or' between faults and events; and faults and causes. Re-draw the lines from top level event to logic gates to faults to logic gates to causes.

f) Continue identifying causes for each fault until you reach a root cause (reactive FTA), or one that you can do something about (proactive FTA). For example, the root cause of "power supply failure" might be "filter clogged;" the root cause of "battery backup exhausted" might be "battery backup too small".

g) Consider countermeasures. A root cause is one you can do something about; so now you need to think of the countermeasures you might apply to each root cause. List counter measures for each root cause in a box under the root cause. For example, for "filter clogged" a countermeasure might be "clean filter monthly." Link the countermeasure to the root cause by drawing a line.

xv) Fault tree analysis diagrams are commonly used to illustrate events that might lead to a failure so the failure can be prevented. Fault tree analysis diagrams are commonly used in Six Sigma process.

9.7 CARE AND MAINTENANCE DURING TEMPORARY DISCONTINUANCE:

If the mine working is discontinued temporarily for more than 120 days, notice will be given 30 days before the date of such discontinuance to the concerned authorities. Accordingly the lease will inform to the Assistant Director of Mines & Geology, Kadapa.

The lessee will take proper Care and Maintenance if any temporary discontinuance of mining operations.

Item	Details	Proposed
Dump management	Area afforested in Ha	0.685
	No of saplings	250
	Cumulative no of plants	50
	Cost including watch and care during the year	1.350Lakh
Management of worked out benches	Area available for rehabilitation Ha	Nil
	Afforestation done ha	Nil

	No of saplings plant in the year	Nil
	Cumulative no of plants	Nil
	Any other method of rehabilitation (specify)	Nil
	Cost including watch and care during the year	Nil
Reclamation and Rehabilitation by backfilling	Void available for Backfilling (Lx B x D) pit wise/stope wise	Nil
	Void filed by waste/tailings	Nil
	Afforestation on the backfilled area	Nil
	Rehabilitation by making reservoir	Nil
	Any other means (specify)	Nil
Rehabilitation of waste land within lease	Area available (Ha)	Nil
	Area rehabilitated	Nil
	Method of rehabilitation	Nil

Emergency Plan:-

1) During discontinuance period safety arrangement and fencing will be provided to avoid the entry of unauthorized persons.
2) On realizing anything serious will be happened anywhere in the mine immediately informs the nearest mining official by the Guard arranged at Quarry Site.
3) On being informed about the emergency it will be verified for the correctness of information and telephone in particular to the Manager and other part of the mine and managers of adjoining mine so that persons may be withdrawn.
4) On receiving information of emergency intimation will be sent to the consultative committee which is already formed. Shift in-charge will ensure that all the materials and transport system to deal with emergency situation.
5) First aid facilities to be ready to receive the cases.

9.8 FINANCIAL ASSURANCE:

Break up of areas in the mining lease for calculation of financial assurance:

Sl. No.	Details	Existing Land use (Ha.)	Additional requirement area during the plan period (Ha)	Land use at the end of the plan period (Ha.)
1	Area under mining	0.000	2.901	2.901
2	Overburden dump	0.000	0.574	0.574
3	Mineral storage/	0.000	0.264	0.264
4	Infrastructure	0.000	0.002	0.002
5	Roads	0.000	0.086	0.086
6	Green belt	0.000	0.685	0.685
	SUB- TOTAL	**0.000**		**4.512**
7	Virgin Area	8.040		3.528
	TOTAL	**8.040**		**8.040**
8	**Safety Zone Area**	**0.870**		**0.870**
TOTAL QUARRY LEASE AREA		**8.910**		**8.910**
Approach Road Area		**0.480**		**0.480**
Total Area		**9.390**		**9.390**

The proposed mining operations for the cost of reclamation & rehabilitation is calculated as per A.P.G.O.MS.No.53, Dated:27-02-2019, Rs.50,000/- per 5.000 hectare after that per hectare 10,000/-. Total LoI Issued area is 8.91Ha an amount of 90,000/-. The financial assurance in the form of Bank Guarantee for INR. 90,000/- will be submitted to the Assistant Director, Department of Mines & Geology, Y.S.R Kadapa – 516 001, Andhra Pradesh.

Qualified Person

SRI. T. BRAHMAIAH,
RQP/DMG/AP/39/2017.

M/s. Sri Balaji Minerals,

Sd Masthan Basha

Sri. Sayyad Masthan Basha,
Managing Partner.

This Mining scheme is Approved Subject to the Conditions Stipulations Indicated in the Mines Scheme Approval Letter, No: 622/MP-MP2/MRKE/22 Dated: 01/04/2022

APPROVED

(B. RAVI KUMAR)
Deputy Director of Mines & Geology
ONGOLE, A.P.

GOVERNEMENT OF ANDHRA PRADESH
DEPARTMENT OF MINES AND GEOLOGY :: IBRAHIMPATNAM

Circular Memo No.3861432/P/2020 Dated:16.07.2021.

Sub: Mines &Minerals - Granting of Mining Lleases/Prospecting Licence/Quarry Leases in Forest Lands – Instructions issued – Regarding.

Ref: 1. Memo. No. 3778/For(1)20001-1, Dt. 20.04.2001 from Environment,Forest,Science &Technology(For.1) Department.
2. Memo. No. S624/For.(1)/2005-2, Dt. 1.09.2005 from Environment,Forest,Science & Technology Department.
3. Circular Memo.No.10205/P1/2001, Dt. 29.05.2009. from Director of Mines &Geology, Hyderabad.
4. Circular Memo.No.10205/P1/01, Dt. 16.09.2009. from Director of Mines &Geology, Hyderabad.
5.Ref.No.EFS02-15029/94/2018-FCA-SEC-PCCF/FCA-,Dt.13.07.2021. from Principal Chief Conservator of Forest &Head of Forest Force, Guntur.

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The attention of the all Assistant Directors and Deputy Directors of Mines &Geology in the state are drawn to the subject and references cited. Through the reference 4th cited Director of Mines &Geology issued Guidelines for processing of ML/QL applications for clearances under forest Conservation Act 1980, to avoid legal complications in future.

In the reference 5th cited, the Principal Chief Conservator of Forest & Head of Forests, Andhra Pradesh stated that during the virtual meeting held with GoI, MoEF & CC, New Delhi on 08.07.2021 while receiving the proposals of the some of applications for which this office forwarded to PCCF for grant of Quarry lease in forest areas, they suggested the authenticated DGPS surveyed sketch of proposed forest area with Geo-coordinates duly indicating land use plan for mining, safety zone, approach road in respect of the four mining proposals,and necessary instruction are being issued to the above user Agencies to furnish the Draft Mining plan based on the above precise area arrived after conducting DGPS survey, to the Director of Mines &Geology, Andhra Pradesh., Ibrahimpatnam for necessary action. Further also informed that the DM&G, AP/the representative authorized by him, may approach the concerned Divisional Forest Officers for entry into Forests to inspect the precise forest area proposed for mining purpose, and finally requested to submit AMP of the said mining proposals as stated below:

1. Grant of quarry lease over an extent of 4.78 ha. Of forest land in compartment no.127, Kondaveedu RF, Ameenabad beat, Perecherla (V), Medikondur Mandal, Guntur for Road Metal &Building Stone in favour of Kunambrahmananda Redd, Ongole, Prakasam District.

2. Grant of quarry lease over an extent of 4.49 ha. Of forest land in compartment no.127, Kondaveedu RF, Ameenabad beat, Perecherla(V), Medikondur Mandal, Guntur for Road Metal &Building Stone in favour of Sri Dar Appa Rao, West Godavari District.

3. Diversion of forest land over an extent of 4.72 ha. In compartment no.450 of Yerrakonda R, Tummagunta Village, Kanigiri Mandal, Prakasam District for excavation of Quartz in favour of M/s AhobilaNarasimha Minerals.

4. Diversion of 4.90 ha. Of forest land falling in compartment no.205 of Ragimanupenta RF, Banagarupalyam (M), Chittoor (West) Division in f/o M/s Prathima Granites for grant of quarry lease for Black Granite.

In this connection it is to inform that, as per the existing provisions laid down under APMMC Rules 1966 the AMP shall allowed only after issue of Notice (LOI) to the applicant. But as per the present instructions received from the PCCF vide reference 5th cited, in the cases, where the M.C. Applications falls in forest area, the proposal shall submit along with AMP duly following the instructions issued in the references 3rd & 4th cited.

Therefore the ADM&G's and DDM&G's in the state are directed while processing mineral concession applications falling in the forest area, proposals shall submit to the DM&G along with the AMP and strictly adhering the instructions issued earlier and approach with the concerned DFO to process the Mineral concession applications as the procedure intimated by the PCCF if necessary.

Further the DDM&G's in the state are directed to consider the AMP for approval of the forest area applications in advance without issuing of Notice to the applicants requesting to submit AMP, EC &CFE.

Sd/- V.G.Venkata Reddy
Director of Mines &Geology

Encl: References as stated above

To
The all ADM&G's (Regular) in the State.
The all DDM&G's in the State.
Copy to the Section Superindents from D1 to D13 / In- charge officers of sections Sand, Vigilence, IT, MR, MERIT,
Copy to DM&G pashi.
Copy submitted to the Principal Chief Conservator of Forest & Head of Forest Force, AranyaBhavan, Andhra Pradesh, K.M. Munshi Road, Guntur-522004, with a request to issue suitable instructions to DFO's in the State for allow if the Mines &Geology Officials and user Agencies to inspect and preparing of AMP in the forest areas.

//Attested//

G. Sunil Baby.
Assistant Director of Mines &Geology

GOVERNMENT OF ANDHRA PRADESH
DEPARTMENT OF MINES AND GEOLOGY

From:
B. Ashok Kumar, M.Sc.,
Asst. Director of Mines and Geology,
Markapur.

To:
The Dy. Director of Mines & Geology,
Ongole, Prakasam dist.

Letter.No.3631/Q/2021 Dt.08-03-2022.

Sir,

Sub:- Mines & Quarries – Application filed for grant of Quarry Lease for Quartz over an extent of 9.390 Hectare in Cmpt. No. 475 of Mundlapadu Beat Veligonda Reserved Forest, C.S.Puram, Kanigiri Range of Giddalur Division of Prakasam dist. in favour of M/s. Sree Balaji Minerals, Partner of Sri Sd. Mastan Basha – Draft Mining Plan Submitted – Regarding.

Ref:- 1. Circular Memo.No.3861432/P/2020, dated:16-07-2021 of the Director of Mines and Geology, Ibrahimpatnam.
2. Application Dated: 03-11-2021 from M/s. Sree Balaji Minerals, Partner of Sri Sd. Mastan Basha, in shape of form "P.

***

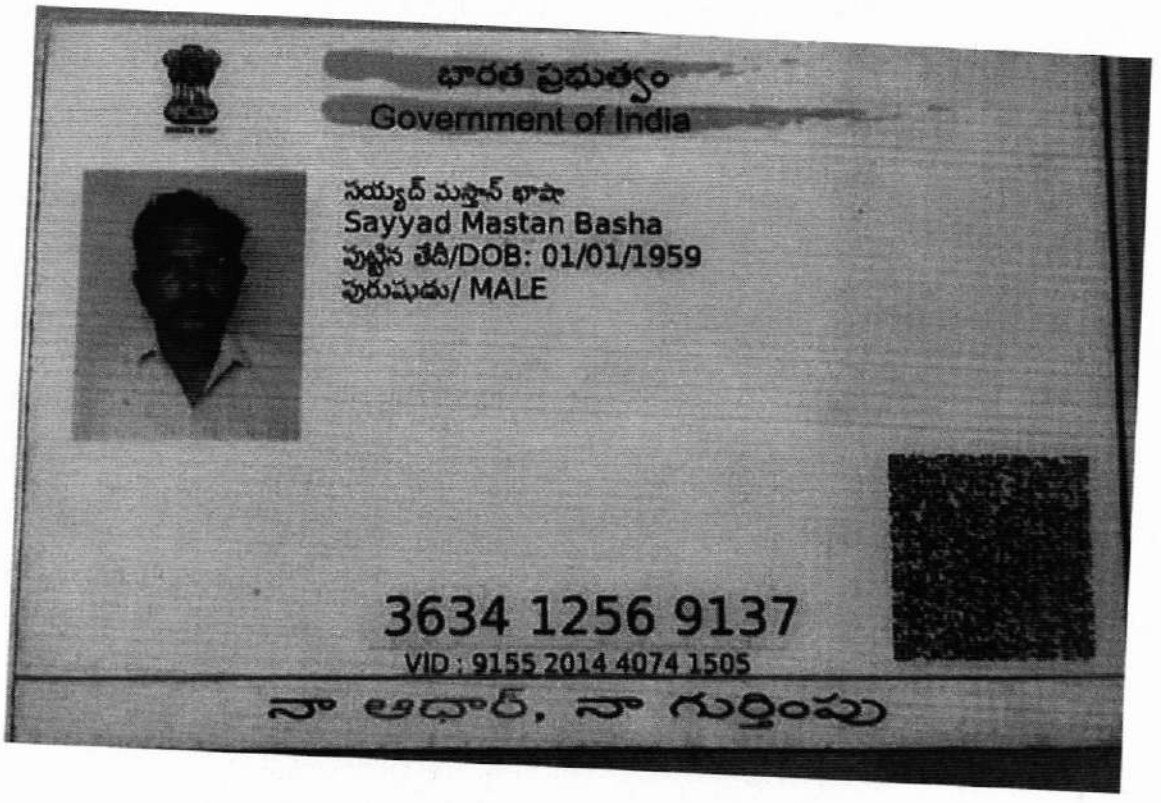
I invite kind attention to the subject and references cited. Through the reference cited, the Director of Mines and Geology, Ibrahimpatnam has directed Dy. Directors of Mines and Geology to consider the AMP for approval of the Forest area applications in advance without issuing of Notice of the applicants requesting to submit AMP,EC,CFE, in case of Mineral Concession applications filed in Reserve Forests.

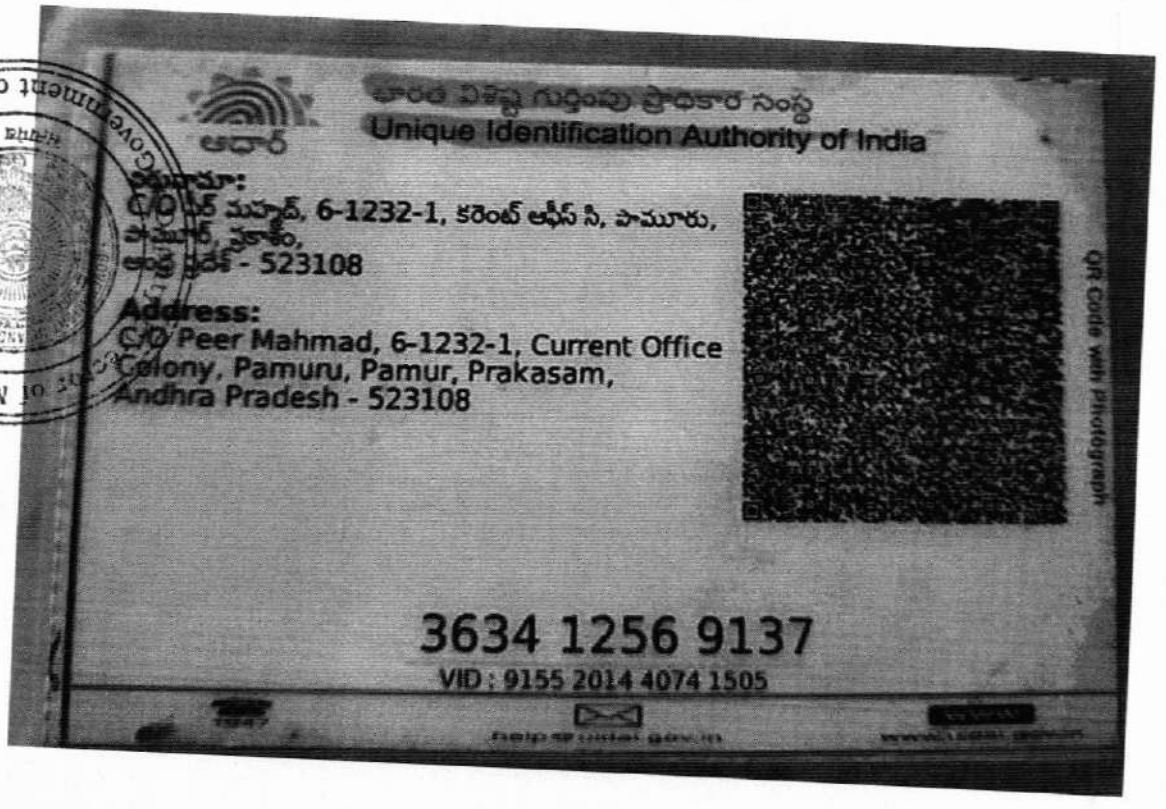
In this connection, I herewith forwarding the draft Mining Plan of quarry lease applicant M/s. Sree Balaji Minerals, Partner of Sri Sd. Mastan Basha submitted for grant of quarry lease for Quartz over an extent of 9.390 Hectares in Compartment No. 475 of Mudalapadu Beat, C.S.Puram Section, Kanigiri Range, Giddaluru Forest Division, Prakasam District for necessary action.

Yours faithfully,

Asst. Director of Mines & Geology
Markapur.

Copy submitted to the Director of Mines and Geology, Ibrahimpatnam for favor of information.


భారత ప్రభుత్వం
Government of India
సయ్యద్ మస్తాన్ భాషా
Sayyad Mastan Basha
పుట్టిన తేదీ/DOB: 01/01/1959
పురుషుడు/ MALE
3634 1256 9137
VID : 9155 2014 4074 1505
నా ఆధార్, నా గుర్తింపు


ఆధార్
భారత విశిష్ట గుర్తింపు ప్రాధికార సంస్థ
Unique Identification Authority of India
చిరునామా:
C/O పీర్ మహ్మద్, 6-1232-1, కరెంట్ ఆఫీస్ సి, పాముూరు,
పాముూర్, ప్రకాశం,
ఆంధ్ర ప్రదేశ్ - 523108
Address:
C/O Peer Mahmad, 6-1232-1, Current Office
Colony, Pamuru, Pamur, Prakasam,
Andhra Pradesh - 523108
QR Code with Photograph
3634 1256 9137
VID : 9155 2014 4074 1505

Balaji Minerals

AP16 28374249

GOVERNMENT OF ANDHRA PRADESH

REGISTRATION AND STAMPS DEPARTMENT

THE REGISTRAR OF FIRMS

PRODDATOR

Memorandum acknowledging receipt of documents

[No : 16 of 2010]

The Registrar of Firms,PRODDATOR hereby acknowledges the receipt of the undermentioned documents

* Incoming / Exiting / Replace Partner for Firms

and intimates that they have been filed in pursuance of the Indian Partnership Act, 1932

Deputy Director of Mines & Geology * Government of A.P. Ongole

SEAL OF REGISTRAR OF FIRMS PRODDATOR DISTRICT A.P.

REGISTRAR OF FIRMS

PRODDATOR

Date : 12/02/2019

To,

Muralidhar

3/75/ Rayavaram/ Proddatur/ Proddulur/ Kadapa/ Andhra Pradesh/ India/

Signature valid

Digitally signed by RAMOJI HAR RAO REDDI
Date: 2019.02.12 09:56:53 IST

Note: This is a Digitally Signed Certificate, does not require physical signature and this certificate can be verified at www.registration.ap.gov.in by furnishing the application number mentioned in the Certificate.

FORM V

(Maintained Under Section 63 of the Indian Partnership Act, 1932)

1. Serial Number of Firm :	[No : 16 of 2010]
2. Name of the Firm :	Sri Balaji Minerals
3. Duration of Firm :	At Will
4. Address :	3/848-6 Ymar Colony Proddatur 516360 Kadapa Dist.

Deputy Director of Mines & Geology ★ Government of A.P. Ongole ★

Principal place of business:

3/848-6 Ymar Colony Proddatur 516360 Kadapa Dist.

Partner Details for the Firm

Name	Address	Joining Date
S. Masatna Bhasha	6-52 Kaermit Pamaur Kadapa.	21/01/2010
Venkata Subba Reddy Dr Lingareddy	435/A Road No-20/ Jublee Hills/ Hyderabad/ Dno-435/a Road No-20 Jublee Hills Hyderabad Telangana 500034/ India/	05/09/2018
Muralidhar Mallela	3/75/ Rayavaram/ Proddatur/ Proddutur/ Kadapa/ Andhra Pradesh/ India/	05/09/2018
Gargi Dr Pamml	435/A Road No-20/ Jblee Hills/ Hyderabad/ Dno-435/a Road No-20 Jublee Hills Hyderabad Telangana 500034/ India/	05/09/2018

R. RAMESH REDDY
JSDP. KDST
Com. Head, Proddatur.

nkata Subhash Ingareddy	435/A Road No-20/ Jublee Hills/ Hyderabad/ Proddutur/ Kadapa/ Dno-435/a Road No-20 Jublee Hills Hyderabad Telangana 500034/ India/	05/09/2018
Venkata Sunil Lingareddy	435/A Road No-20/ Jublee Hills/ Hyderabad/ Dno-435/a Road No-20 Jublee Hills Hyderabad Telangana 500034/ India/	05/09/2018
Uma Rajoli	3/75/ Rayavaram/ Proddatur/ Proddutur/ Kadapa/ Andhra Pradesh/ India/	05/09/2018
Prasad Reddy Basireddy	16/327-4 Upstairs/ Nadimpalli Street/ Proddatur/ Proddutur/ Kadapa/ Andhra Pradesh/ India/	05/09/2018
Lakshmi Kumar Reddy Mopuru Muni	3/908/ Old Dsp Office Lane/ Ymr Colony Proddatur/ Proddutur/ Kadapa/ Andhra Pradesh/ India/	05/09/2018

Document Details

Document Type	Document Name
FORM-V	FormVofSreeBalajiMineralsOutgoingAndInc

Deputy Director of Mines & Geology * Government of A.P. Ongole *

K. RAMESH REDDY
USDP - KDST
Cor.. Road, Proddatur.
YSR DT. - A.P. 516360

152749331832019020 7

1527 4933/53 10/F/0207

FORM NO. V
(See Rule4)
THE INDIAN PARTNERSHIP ACT, 1932

Notice of change in the constitution of the firm Presented or forwarded to the Registrar of firms filling by **M/S SREE BALAJI MINERALS**

Under Section 63(1) of the Indian Partnership Act, 1932, notice is hereby given that:-

The Constitution of the firm **M/S SREE BALAJI MINERALS, 16/327-4, NADIMPALLI STREET, PRODDATUR -516360, KADAPA DIST., ANDHRA PRADESH** has been altered as follows:-

Deputy Director of Mines & Geology ★ Government of A.P. Ongole ★

Name and full address of the incoming partner and date of his joining the firm	Name and full address of the outgoing partner and date of ceasing to be partner
(1) **Dr. LINGAREDDY VENKATA SUBBA REDDY,** **Son of Late Sri L. SUBBA REDDY,** **D.No. 435/A, Road No. 20, Jublee Hills,** **Hyderabad – 34** **DOJ: 05-09-2018**	**MOPURI PRABHAVATHI** **W/o RAMA SUBBA REDDY** **3/907-1, YMR COLONY,** **PRODDATUR** DOD – 30-04-2014
(2) **MALLELA MURALIDHAR,** **Son of Sri M. VENKATA RAMANA REDDY,** **D.No.3/75, Rayavaram, Proddatur, Kadapa Dist.,** **DOJ: 05-09-2018**	**BEERAM CHANDRA SEKHAR REDDY** **S/o SUBBA REDDY** **2/37-3,** **JOGIREDDYGARIPALLI (V)** **BADVEL (M)** **DOC: 05-09-2018**
(3) **Dr. PAMMI GARGI,** **W/O LINGAREDDY VENKATA SUBBA REDDY,** **D.No. 435/A, Road No. 20, Jublee Hills,** **Hyderabad – 34,** **DOJ: 05-09-2018**	

Name and full address of the incoming partner and date of his joining the firm	Name and full address of the outgoing partner and date of ceasing to be partner
(4) LINGAREDDY VENKATA SUBHASH, S/O LINGAREDDY VENKATA SUBBA REDDY, D.No. 435/A, Road No. 20, Jublee Hills, Hyderabad – 34, DOJ: 05-09-2018	
(5) LINGAREDDY VENKATA SUNIL, S/o LINGAREDDY VENKATA SUBBA REDDY, D.No. 435/A, Road No. 20, Jublee Hills, Hyderabad – 34, DOJ: 05-09-2018	
(6) RAJOLI UMA W/o Sri. MALLELA MURALIDHAR, D.No.3/75, Rayavaram, Proddatur, Kadapa Dist., DOJ: 05-09-2018	
(7) BASIREDDY PRASAD REDDY, S/o B. RAMA LINGA REDDY, D.No. 16/327.4, Upstairs, Nadimpalli Street, Proddatur, Kadapa Dist, DOJ: 05-09-2018	

★ Deputy Director of Mines & Geology ★
★ Government of A.P. Ongole ★

Name and full address of the incoming partner and date of his joining the firm	Name and full address of the outgoing partner and date of ceasing to be partner
(8) **MOPURU MUNI LAKSHMI KUMAR REDDY, S/o M. RAMA SUBBA REDDY, D.No.3/908, Old DSP Office Road, YMR Colony, Proddatur, Kadapa Dist.,** **DOJ: 05-09-2018**	

- **The address of the Firm is also Changed to D.No. 16/327-4, NADIMPALLI STREET, PRODDATUR -516360, KADAPA DIST.,**

Deputy Director of Mines & Geology * Government of A.P. Ongole *

Station : Proddatur
Date : 05-09-2018

Signature of the incoming partners or his specially authorised agent

(2) M. Muralidhar

(4) Z. Subash

(6) R. Umay

(8) M. M. L. Kumar Reddy

(1) [illegible]

(3) P. [illegible]

(5) [illegible]

(7) R. [illegible]

RP (1) B. Chan[illegible]

DECLARATION

1. I, SYED MASTAN BASHA S/o PEERU MOHAMMAD years of age of 60 religion Muslim do hereby declare that the above statement is true and correct to the best of my knowledge and belief..

Date: 5/9/18

Witness:

signature

Deputy Director of Mines & Geology Government of A.P. Ongole

2. I, Dr. LINGA REDDY VENKATA SUBBA REDDY S/o L. SUBBA REDDY years of age of 74 religion Hindu do hereby declare that the above statement is true and correct to the best of my knowledge and belief.

Date: 5/9/18

Witness:

signature

3. I, MALLELA MURALIDHAR S/o M..V. RAMANA REDDY years of age of 50 religion Hindu do hereby declare that the above statement is true and correct to the best of my knowledge and belief.

Date: 5/9/18

Witness:

signature

4. I, Dr. PAMMI GARGI W/o L.VENKATA SUBBA REDDY years of age of 68 religion Hindu do hereby declare that the above statement is true and correct to the best of my knowledge and belief.

Date: 5/9/18

Witness:

P.G
signature

Deputy Director of Mines & Geology
Government of A.P. Ongole

5. I, LINGAREDDY VENKATA SUBASH S/o L. VENKATA SUBBA REDDY years of age of 47 religion Hindu do hereby declare that the above statement is true and correct to the best of my knowledge and belief.

Date: 5/9/18

Witness:

signature

6. I, LINGAREDDY VENKATA SUNIL S/o L. VENKATA SUBBA REDDY years of age of 44 religion Hindu do hereby declare that the above statement is true and correct to the best of my knowledge and belief.

Date: 5/9/18

Witness:

signature

7. I, RAJOLI UMA W/o M. MURALIDHAR years of age of 43 religion Hindu do hereby declare that the above statement is true and correct to the best of my knowledge and belief.

Date: 5/9/18

Witness:

signature

8. I, BASIREDDY PRASAD REDDY S/o B. RAMALINGA REDDY years of age of 49 religion Hindu do hereby declare that the above statement is true and correct to the best of my knowledge and belief.

Date: 5/9/18

Witness:

signature

9. I, MOPURU MUNI LAKSHMI KUMAR REDDY S/o M. RAMA SUBBA REDDY years of age of 29 religion Hindu do hereby declare that the above statement is true and correct to the best of my knowledge and belief.

Date: 5/9/18

Witness:

signature

PRODDATUR PRODDATUR

PARTNERSHIP DEED

This RECONSTITUTION DEED OF PARTNERSHIP entered into at Proddatur, this the 05th day of September, 2018 by and between:

1. Sri. SYED MASTHAN BASHA, Son of Sri PEERU MOHAMMAD, aged 60 years, residing at No.6-52, Current Office Colony, Pamur Village, Prakasam District, Andhra Pradesh, herein after called the party of the FIRST PART.

2. Dr. LINGAREDDY VENKATA SUBBA REDDY, Son of Late Sri L. SUBBA REDDY, aged about 74 years, residing at D.No. 435/A, Road No. 20, Jublee Hills, Hyderabad – 34, Telangana State, herein after called the party of the SECOND PART.

3. Sri. MALLELA MURALIDHAR, Son of Sri. M. VENKATA RAMANA REDDY, aged 50 years, residing at D.No.3/75, Rayavaram, Proddatur, Kadapa Dist., Andhra Pradesh, herein after called the party of the THIRD PART.

4. Dr. PAMMI GARGI, Wife of Sri Dr LINGAREDDY VENKATA SUBBA REDDY, aged 68 years, residing at D.No. 435/A, Road No. 20, Jublee Hills, Hyderabad – 34, Telangana State, herein after called the party of the FOURTH PART.

5. Sri. LINGAREDDY VENKATA SUBHASH, Son of Dr. LINGAREDDY VENKATA SUBBA REDDY, aged 47 years, residing at D.No. 435/A, Road No. 20, Jublee Hills, Hyderabad – 34, Telangana State, herein after called the party of the FIFTH PART.

6. Sri. LINGAREDDY VENKATA SUNIL, Son of Dr. LINGAREDDY VENKATA SUBBA REDDY, aged 44 years, residing at D.No. 435/A, Road No. 20, Jublee Hills, Hyderabad – 34, Telangana State, herein after called the party of the SIXTH PART.

Deputy Director of Mines & Geology, Govt. of A.P. Ongole

① Sd. Masthan Basha ② ⑤ M. Muralidhar

④ P. Gargi ⑤ ⑥

⑦ R. ⑧ B. ⑨ M. M. L. Kumar Reddy

○ B. Chowdary

7. Smt. RAJOLI UMA Wife of Sri. MALLELA MURALIDHAR, aged 43 years, residing at D.No.3/75, Rayavaram, Proddatur, Kadapa Dist., Andhra Pradesh, herein after called the party of the SEVENTH PART.

8. Sri. BASIREDDY PRASAD REDDY, Son of Late Sri. B. RAMA LINGA REDDY, aged about 49 years, residing at D.No. 16/327.4, Upstairs, Nadimpalli Street, Proddatur, Kadapa Dist, Adnhra Pradesh, herein after called the party of the EIGHTH PART.

9. Sri. MOPURU MUNI LAKSHMI KUMAR REDDY, Son of Sri M RAMA SUBBA REDDY, aged 29 years, residing at D.No.3/908, Old DSP Office Road, YMR Colony, Proddatur, Kadapa Dist., Andhra Pradesh, herein after called the party of the NINETH PART.

Whereas the parties of the First part with another two parts had carried on the business of prospecting and exploring of Minerals, Mining, Trading, Import and Export of Minerals, Processing of all kinds of major and minor Minerals, take up Works Contracts, Mining works, establish value added Industries related to all kinds of Minerals and any other related business that may be carried with the mutual consent of all the partners, under the name and style of **"M/s SREE BALAJI MINERALS"** at D.No.3/907-1, YMR Colony, Proddatur under the provisions of the Partnership Deed Dated: 05-02-2010 as 16 of 2010 with Registrar of Firms, Proddatur. Since the party of the First part to the original deed Smt. Mopuri Prabhavathi has expired, the other parties to the deed desired to reconstitute the firm, Where as from 05th September 2018 the party of the First Part of the original deed Smt. Mopuri Prabhavathi will be represented by her son as per the no objection affidavit produced by their family members. and Third Part to the original deed Sri. Beeram Chandra Sekhar Reddy wants to retire from the business due to his personal reasons, the party of the Second Part to Nineth Part is being taken into Partnership and also to carry on the Business of prospecting and exploring of Minerals, Mining, Trading, Import and Export of Minerals, Processing of all kinds of major and minor Minerals,

take up Works Contracts, Mining works, establish value added Industries related to all kinds of Minerals and any other related business that may be carried with the mutual consent of all the partners under the name and style of **"M/s SREE BALAJI MINERALS"** at D.No. 16/327-4, Nadimpalli Street, Proddatur, Kadapa District, Andhra Pradesh., Whereas the Parties of the First part to Nineth Part hereto have desired that the terms and conditions under which the business is to be carried on be reduced into writing. This instrument of Partnership witnesseth as under:

NOW THIS DEED OF PARTNERSHIP WITNESSESS AS FOLLOWS

1. **FIRM NAME:** The parties hereto hereby have agreed to and remain, as partners in the partnership business and the partnership business shall be carried on under the name and style of **"M/s SREE BALAJI MINERALS ".**

2. **NATURE OF BUSINESS:** The business of Partnership Firm shall be that of prospecting and exploring of Minerals, Mining, Trading, Import and Export of Minerals, Processing of all kinds of major and minor Minerals, take up Works Contracts, Mining works, establish value added Industries related to all kinds of Minerals and any other related business that may be carried with the mutual consent of all the partners from time to time.

3. **PLACE OF BUSINESS:** The Partnership business shall be carried on at D.No. 16/327-4, Nadimpalli Street, Proddatur, Kadapa Dist., Andhra Pradesh, as its Head Office. The firm may also carry on the business at such other place or places as the Partners may determine from time to time.

4. **CAPITAL:** The funds required for the purpose of the Partnership business shall be contributed or arranged by the partners in such manner as may be mutually agreed upon; and that interest to Capital account and/or Current account or Loan Account shall be charged at the rate of 12% per annum.

(1) S.J. Mathan Babu (2) (3) M. Jurabdhas

(4) P.G. (5) (6)

(7) R. (8) (9) M.M.L. Kumar Reddy

(10) B. Chen

5. **REMUNERATION TO THE WORKING PARTNERS:**

All the partners are working partners of the firm, and entitled to the remuneration of Rs.30,000/- pm. The remuneration may be increased or decreased by writing a corrigendum

PROVIDED always that the remuneration payable to the partners shall not exceed the maximum permissible limit U/S 40(b) (v) the Indian Income tax Act, 1961 and other related provisions

6. **PROFIT AND LOSS SHARING RATIO:** The Net Profit after remuneration to working partners as per clause 5 shall be divided amongst the partners in following Ratio

S.No.	NAME OF THE PARTNER	%
1	SYED MASTHAN BASHA	06
2	DR. LINGAREDDY VENKATA SUBBA REDDY	10
3	MALLELA MURALIDHAR	20
4	DR. PAMMI GARGI	05
5	LINGAREDDY VENKATA SUBHASH	10
6	LINGAREDDY VENKATA SUNIL	10
7	RAJOLI UMA	15
8	BASIREDDY PRASAD REDDY	14
9	MOPURU MUNI LAKSHMI KUMAR REDDY	10
	TOTAL	100

RP

7. **BANK ACCOUNT:** An Account or Accounts shall be operated with any Bank or Banks in the name of the Firm as may be agreeable among the partners from time to time. The Bank Account(s) of the Firm shall be operated by the parties of Second part Dr. Lingareddy Venkata Subba Reddy, Third part Sri. Mallela Muralidhar and Eighth part Sri. Basireddy Prasad Reddy of the Deed Individually.

8. **ACCOUNTS:** Books of Accounts shall be kept as are usually maintained in the business of similar nature and the Partners hereto shall have access to the same and that no books of account or papers shall be removed from the business premises without the mutual consent of all the partners.

9. **ACCOUNTING PERIOD:** The Accounts of the firm shall be closed every year on the 31st day of march and Profit and Loss Account and general statement of Assets and Liabilities shall be prepared so soon after the end of the year as is practicable.

10. **BORROWINGS:** The Firm shall have the power to borrow or raise any loans from the Financial Institutions, Banks, Companies, Firms and Individuals or from whatever sources for the purpose of Partnership business. All the Partners are here by authourised to exercise the above said borrowing powers on behalf of the Firm.

11. **ADMISSION OF PARTNER OR PARTNERS:** The Partners of the Firm may admit one or more Partners to the business of Partnership on such terms and conditions as may be mutually agreed to between them, when the situation so warranted.

① Sd. Mokkam Ratha. ② ③ M. Muralidhar

④ P. Gangi ⑤ L. Subash ⑥

⑦ R. Uma. ⑧ B. Prasad Reddy ⑨ M.M.L. Kumar Reddy

RD ① B. Chandra

12. **RETIREMENT OF PARTNER:** If during the continuance of the Partnership, any partner is desirous of retiring from the Partnership, he shall be at liberty to do so by giving a notice of one month in writing to the other partners conveying his intention of retiring from the partnership business. The amount standing to the credit of the retiring partner including the share of profit or loss upto the date of retirement shall be settled by the other partners within a reasonable time. If it is found that there is a debit balance in the account of the retiring partner; the retiring partner will settle the same within a reasonable time. Such retiring partner shall not be entitled to any share in the GOODWILL if any, of the Firm.

13. **CONTINUANCE OF PARTNERSHIP:** The partnership may be dissolved only by the mutual consent of all the partners. The retirement, death or insolvency of any partner shall not have the effect of dissolving the partnership. On any such event, the continuing partners or surviving partners shall be entitled to continue the partnership business by admitting one or more partners on such terms and conditions as may be mutually agreed to between them.

Deputy Director of Mines & Geology, Govt. of A.P. Ongole

14. **LIMITATION OF THE PARTNER'S RIGHTS:** Subject to clauses 7 and 10, no partner shall except with the consent of other partners;

- In any way pawn, pledge, assign his interest or any part thereof in the partnership business,
- Do or suffer anything where by the partnership business may be endangered,
- Assign or charge his share in the assets or profits of the partnership; and

(1) Sd. MaffhanBatha (2) [signature] (3) M. Muralidhar

(4) P. Gaayi (5) Z. Subash (6) [signature]

(7) R. Umay (8) B. [signature] (9) M.M.L. Kumar Reddy

R.D (1) B. Chan[signature]

- Dispose or buy, pledge, sell or otherwise part with any part of the partnership assets.

15. **RIGHT OF PARTNER'S:** That all the parties to this Deed shall jointly or singly have the power to file suits in the court of law on any third party which are connected to this Partnership business.

16. **ARBITRATION CLAUSE:** Any dispute or difference arising among partners either during the continuance of business or afterwards with regard to construction of the terms of this deed or any part there of or any difference of opinion over the rights and liabilities of the partnership business shall be referred to arbitration under the Indian Arbitration Act, 1940, or any statutory modification thereof for the time being in force.

17. **APPLICATION OF PARTNERSHIP ACT:** This Deed shall be read, construed and interpreted in accordance with the provisions of the Indian Parthership Act, 1932 and its later amendments, except for the matters not specifically provided for in this Deed.

18. **EXECUTION/SIGNING**: All the partners are individually authorized to sign, endorse, accept, submit, authorize, follow up and represent relates to any applications, Deeds, Tenders before any of the Legal, Statutory and Govt Authorities and the same is binding on the Firm.

(1) Sd. Mathan Babu (2) (3) M. Prabhakar

(5) L. Subash (6)

(4) P. Gopi (8) B. Prabhakar (9) M.M.L. Kumar Reddy

(7)

(1) B. Chandra

RP

19. **AMENDMENT:** That any of the above terms may be varied, altered, amended or substituted by mutual consent being whether in writing or implied in conduct.

20. **SAVING CLAUSE:** Any of the above terms may be altered, varied, amended or added to by common consent of the partners as and when found necessary.

IN WITNESS WHEREOF THE PARTIES HERETO HAVE SET THEIR HANDS ON 5th DAY OF SEPTEMBER 2018.

Syed Masthan Basha
(Party of the First Part)

Dr.Lingareddy Venkata Subba Reddy
(Party of the Second Part)

Mallela Muralidhar
(Party of the Third Part)

Dr. Pammi Gargi
(Party of the Fourth Part)

Lingareddy Venkata Subhash
(Party of the Fifth Part)

Lingareddy Venkata Sunil
(Party of the Sixth Part)

R. Uma.

Rajoli Uma
(Party of the Seventh Part)

B. Prasad Reddy

Basireddy Prasad Reddy
(Party of the Eighth Part)

M.M.L. Kumar Reddy

Mopuru Muni Lakshmi Kumar Reddy
(Party of the Nineth Part)

Deputy Director of Mines & Geology
Government of A.P. Ongole

B. Chandra Sekhar Reddy

Beeram Chandra Sekhar Reddy
(Retiring Partner)

Witness

1. G.V. Venkata Subba Reddy G.VENKATA SUBBA REDDY
S/O G. Ramasubba Reddy. D.NO. 3/848-6
Y.M.R. Colony, Proddatur, Y.S.R. Kadapa (Dt) A.P

2. Ch. Rama Yella Reddy
S/o Ch. Yella Reddy
4-35A Kanepalli (V).
Proddatur.

ఆంధ్రప్రదేశ్ ప్రభుత్వము
GOVERNMENT OF ANDHRA PRADESH

ఫర్ము రిజిస్ట్రేషను స్వీకృతి
ACKNOWLEDGEMENT OF REGISTRATION OF FIRM

1932 భారత భాగస్వామ్య చట్టపు 58 (1) వ విభాగము ద్వారా నిర్ణయించబడిన వివరణ అందినట్లు ప్రొద్దుటూరు ఫర్ముల రిజిస్ట్రారు ఇందుమూలముగా తెలుపుచున్నారు.

The Registrar of Firms, Proddatur hereby acknowledge the receipt of the statement prescribed by section 58(1) of the Indian Partnership Act. 1932

ఆ వివరణ దాఖలు చేయబడినది. ఫర్ము యొక్క పేరు.....

.....ప్రొద్దుటూరు వందు వ సంవత్సరపు

.....సంఖ్య గల ఫర్ము రిజిస్టరులో నమోదు చేయబడినది.

The Statement has been field and the name of the firm SREE BALAJI MINERALS, PRODDATUR.

has been entered in the register of Firms as No. -16- of 2010 at Proddatur.

రిజిస్ట్రారు కార్యాలయము, ప్రొద్దుటూరు.

తేది :

THE SEAL OF THE REGISTRAR OF FIRMS PRODDATUR

ఫర్ముల రిజిస్ట్రారు, ప్రొద్దుటూరు.
Registrar of Firms, Proddatur.

Dated the 05th day of February 2010

Partnership Deed

This deed of partnership is made on this 21st day of January, 2010 by and between:

1. Mopuri Prabhavathi, daughter of Rama Subba Reddy
   Resident of 3/907-1, YMR Colony, Proddatur town, Kadapa district

2. Syed Masthan Bhasha, son of Peeru
   Resident of 6-52, Karent Office Colony, Parnur Village, Prakasam district and

3. Beeram Chandra Sekhar Reddy, son of Subba Reddy,
   Resident of 2/37-3, Jogireddygaripalli village, Badvel Mandalam, Kadapa district.

here in after called the parties of the 1st, 2nd, and 3rd parts respectively witnesseth as follows.

Whereas the above named three persons have constituted into a partnership firm on this day, to carry on the business of mining, exploration and trading of minerals and their products in the name and style of **"Sree Balaji Minerals"** at Proddatur town, and whereas, it is deemed necessary to reduce into writing the terms and conditions of the partnership, they are hereby declared and confirmed as follows:

1. The business of the partnership shall be carried on in the name and style of **"Sree Balaji Minerals"**, with an office at 3/907-1, YMR Colony, Proddatur own, Kadapa district, Andhra Pradesh.

2. The profit and losses of the partnership shall be shared by the partners in the following proportion:

1. Mopuru Prabhavathi	60%
2. Syed Masthan Bhasha	30%
3. Beeram Chandra Sekhar Reddy	10%
Total	100%

3. The capitals invested by the partners, and all sums standing to the credit of partners shall carry interest at the rate of 12% per annum or at such reduced rate of interest as may be mutually agreed upon by the partners; subject to the limits prescribed under section 40(b) of the Income Tax Act, 1961.

4. All partners are working partners of the firm, and entitled to the remuneration. The aggregate amount of remuneration payable to the working partners will be the amount

Sd. Masthan Basha.

allowable as deduction under the provisions of the Income Tax Act, 1961, and such aggregate amount of remuneration shall be allocated equally and credited to the partners' accounts. The remuneration shall be calculated at the time of closing the books of account and credited to the khathas of the partners. The amount of remuneration may be reduced keeping in view of the profits available in each year with the mutual consent of all partners.

5. The profit and losses of the partnership shall be arrived at the end of financial year i.e., on 31st March, every year. The net profit or loss of the firm shall be arrived at after deduction of all expenses incurred by the firm, interest payable to the creditors and partners and the remuneration payable to the working partners of the firm. The net profit or loss, thus, arrived shall be divided as per the shares detailed in para no.2 above, and credited / debited to the khathas of the partners.

6. The profit or loss of the partnership shall be arrived at after scrutiny of the accounts etc., of the firm by the partners and no partner can question the correctness of the accounts etc., which are finalised and the net profit or loss is ascertained and distributed.

7. The party of the 2nd part viz., Syed Masthan Bhasha is the managing partner of the firm and he is authorised individually to represent the firm in connection with the submission of applications for obtaining licenses and leases, and all partners are entitled

individually or jointly to enter agreements in connection with the business of the firm. They are authorised individually to represent in all the activities connected to the business of the firm and the same is binding on firm.

8. All partners are entitled either individually or jointly to borrow funds from outsiders, banks and other financial institutions, and to open and operate bank accounts and negotiate all negotiable instruments on behalf of the firm.

9. All the amounts that are borrowed or collected by the partners on behalf of the firm shall be duly entered or got entered in the accounts of the firm. The firm, or the other partners, shall not be liable for the amounts borrowed or collected by the partners, unless, they are duly entered in the accounts of the firm.

10. The firm may obtain licenses and leases either in the name of the firm, or in the name of any of the partners of the firm and may start and engage itself, in any new business and open branches anywhere, with the consent of all partners..

11. All partners shall diligently take part in the business of the firm, and may come to an agreement on any matter, which is not covered by this instrument and may amend, alter, or delete, and include to, any terms and conditions of this instrument.

Partnership Deed - Sree Balaji Minerals

12. The partnership is terminable at will and owns no goodwill. No partner, on ceasing to be a partner of the firm can claim any right or share as goodwill of the firm.

All the partners are bound by the above terms and conditions, as well as, the provisions contained in the Indian Partnership Act, 1932.

In witnesses whereof, we, the partners, hereto have set and subscribed our signatures on this day, and the year, first abovementioned.

1. [signature]
2. Sd. [signature]
3. B. Cha[signature]

In the presence of witnesses:

1. M. [signature]
M. MURALIDHAR
3/75, Rayavaram
Khadda Bed post
Proddatur
Khadda
Kadapa DIST.

2. G. [signature]
G. RAVINDRA
[illegible]
PRODDATUR
KADAPA Dist

आयकर विभाग
INCOME TAX DEPARTMENT

भारत सरकार
GOVT. OF INDIA

SREE BALAJI MINERALS

05/02/2010
Permanent Account Number

ABZFS6983J

Deputy Director of Mines & Geology
Government of A.P. Ongole
07102011

इस कार्ड के खोने / पाने पर कृपया सूचित करें / लौटाएं :
आयकर पैन सेवा इकाई, एन एस डी एल
तीसरी मंज़ील, सफायर चेंबर्स,
बानेर टेलिफोन एक्स्चेंज के नजदीक,
बानेर, पुना – 411 045

If this card is lost / someone's lost card is found,
please inform / return to :
Income Tax PAN Services Unit, NSDL
3rd Floor, Sapphire Chambers,
Near Baner Telephone Exchange,
Baner, Pune - 411 045

Tel: 91-20-2721 8080, Fax: 91-20-2721 8081
e-mail: tininfo@nsdl.co.in

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 T. Bramhaiah, *S/o. Sri T. Veeraiah R/o 1/17, Kuppalapalli (V&P) Vempalli Mandal, YSR Kadapa District, Andhra Pradesh whose photograph is affixed herein above, having given evidence of his qualification and experience is hereby granted recognition under rule 14(3) of Granite Conservation & Development Rules, 1999 as Qualified Person to prepare Mining Plans/ Schemes.*

Registration Number is : ***RQP/DMG/AP/39/2017***

This Recognition is ***valid for a period of 10 years with effect from 15 .05.2017 valid upto 14 .05.2027.***

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: Ibrahimpatnam
Date: 15 .05.2017.

Director of Mines and Geology
Director of Mines and Geology
Department of Mines and Geology
Govt. of A.P., Ibrahimpatnam
Krishna District

NATURAL RESOURCES DEVELOPMENT CO-OPERATIVE SOCIETY LTD.,

Natural Resources Development Co-Operative Society Limited undertakes the ~~testing /~~ analysis of Sample (s), Subject to the following terms and conditions.

In the absence of specific request from the customer NRDCS has the freedom to adopt any National / International standard specifications test method for conducting the tests. In the absence/non-accessibility of a standard specifications. NRDCS may suggest a test specification and adopt the some in confirmation from the customer.

In the rare event any deviation from the specified analysis or test method becomes necessary for whatever reason the customer shall be informed in writing of such deviation, the reasons for it and its adverse effect if any on the result.

Samples are not drawn by NRDCS unless otherwise mentioned. The results are applicable only to the submitted sample. Endorsement of the product is neither inferred nor implied.

Perishable sample will be destroyed after testing, others after one month from the date of issue of the report, unless otherwise mentioned by the customer as required by the ACL.

The test report in full or part shall not be used for promotional or publicity purpose without the written consent by NRDCS.

The laboratory normally will not offers any opinion / advice or recommendation with respect to the suitability or otherwise of the sample for any application or use conformities to a specification or Act will be mentioned as required by the Act / specifications.

Under no circumstances NRDCS accepts any liability or loss or damage caused by use or misuse of the test report liability is limited to the testing fee charged, in case of proven negligence by the laboratory.

Samples drawn under special circumstances like insurance coverage or medico-legal cases shall be declared by the customer at the time of registrations.

In case of cancellation of registration for any reason, refund of the test charges will be made after adjusting the incidental expense if any.

Unspent sample or samples not accepted for testing, for any reason (s) will be returned to the customer on a written request at his own cost.

NRDCS shall not assume any responsibilities for variations characteristics of samples taken up for analysis after holding up for want of clarifications of the customer.

PVSL Prasad
Secretary

TC–6712

Test Report No: NRDCS /CAD / 20-21 / 11940

Name & Address of the Customer: **M/s. Sri Balaji Minerals,** **Sayyad Masthan Basha,** **Managing Partner.** **Compartment No. 475 of Mudlapadu bEat, C.S. Puram Section , kanigiri range, prakasham district**	**Issue Date : 17-03-2021** **Your Ref :** **Ref : SR 4803**
Sample Particulars : Quartz **Location : C.S.Puram** **Qty : 1 X 250 grms.** **Test Required : LOI, Fe_2O_3, SiO_2, Al_2O_3,CaO,MgO ,K_2O,Na_2O, E C**	**Date of Registration : 12-03-2021** **Date of Commencement of test : 12-03-2021** **Date of Completion of testing : 16-03-2021** **Sample condition when received : OK** **Sample tested as received**

Sampling Method: Sample collected and submitted by the customer **Page : 1 of 1**

Sl. No.	Tests	Test Method	Results obtained % by mass
LAB CODE			**17725**
1	* Loss on Ignition	IS:1917 (PART-1)	0.30
2	Silica as SiO_2	*IS-1917(part-3)-1992 (R A - 2005)*	99.62
3	Ferric Oxide as Fe_2O_3	*IS-1917(part-5)-1992 (R A - 2005)*	0.01
4	Alumina as Al_2O_3	*IS-1917(part-4)-1992 (R A - 2006)*	<0.01
5	*Calcium as CaO	IS:1917 (PART-6)	0.01
6	*Magnesium as MgO	IS:1917 (PART-6)	<0.01
7	*Sodium as Na_2O	IS:1917 (PART-2)	0.01
8	*Potassium as K_2O	IS:1917 (PART-2)	<0.01
9	*E.C. Micro Siemens	5% Extraction Solution	10

*** Out of NABL Scope**

Remarks:

The test results relates only to the sample tested.

M Ravindar

(M. Ravindar)
Analyst

Terms and conditions overleaf.

LOCATION & KEY PLAN FOR QUARTZ

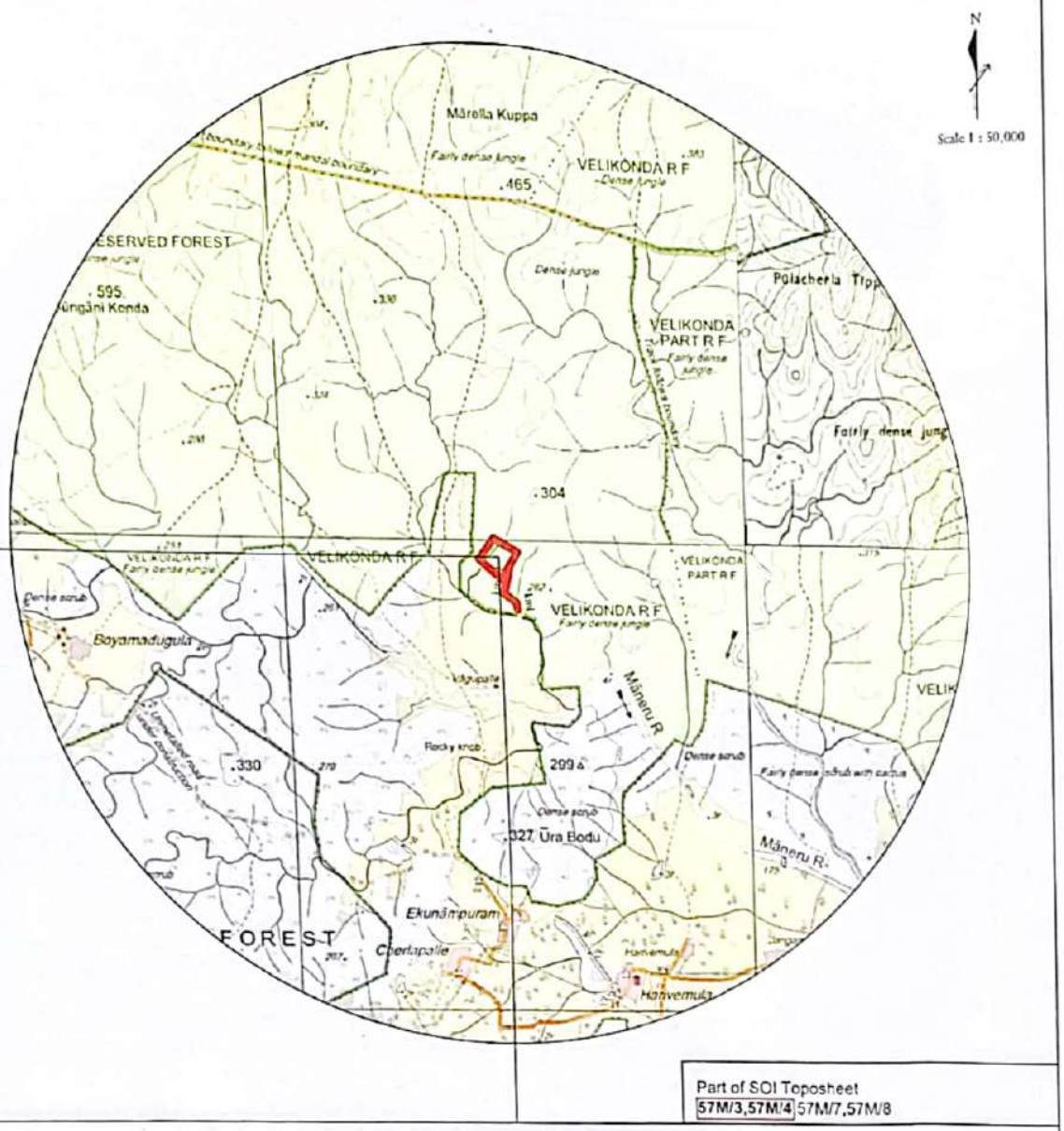
PLATE - 1

INDEX-A

WIND DIAGRAM

S.No	Easting	Northing	Elevation
BM1	309685.192142	1686362.535580	225.152
BM2	309449.916117	1686565.645380	221.677
BM3	309611.339667	1686779.208850	236.271
BM4	309862.448817	1686641.817470	228.32

SY.NO	VILLAGE NAMES	DISTANCE	POPULATATION
1	EKUNAMPURAM	3.6KM	1500
2	HARIVEMULA	4.1KM	750
3	BOYAMADUGULA	4.5KM	1350
4	CHERLAPALLE	4.1KM	935



Part of SOI Toposheet
57M/3,57M/4 57M/7,57M/8

LEGEND

- STREAM
- VILLAGE
- ROAD
- FOREST BOUNDARY
- QL AREA
- 5 Km RADIUS
- TANK

PLATE No.1

Mining Plan for QUARTZ

Sy.No :475/Part of C.S Puram Village, Kanigiri Mandal, Prakasam District, A.P.

Applicant	M/s. Sri Balaji Minerals
Title	KEY PLAN
Scale :- 1 : 50,000 R.F.	Extent :- 9.39 Hectares

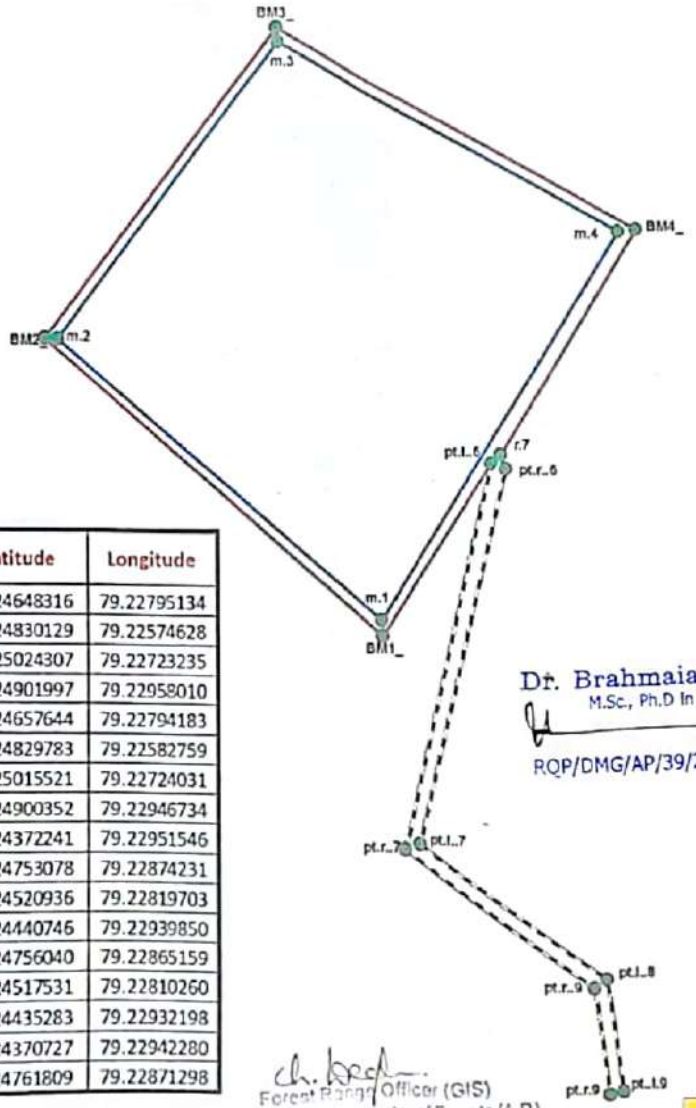
Applicant

Dr.Brahmaiah.T
RQP/DMG/AP/39/2017

DGPS Survey & Mapping of Mining Saftey Zone Area in Compartment No.475 by M/s.Sri Balaji Minerals of Mundlapadu Beat,Veligonda RF, C.S.Puram Section,Kanigiri Range,Prakasam Dist, in Andhra Pradesh State.

N
W E
S

1:3500



S no	Name	Easting	Northing	Elevation	Latitude	Longitude
1	BM1_	309685.192142	1686362.535580	225.152	15.24648316	79.22795134
2	BM2_	309449.946117	1686565.645380	221.677	15.24830129	79.22574628
3	BM3_	309611.339667	1686779.208850	236.271	15.25024307	79.22723235
4	BM4_	309862.448817	1686641.817470	228.320	15.24901997	79.22958010
5	m.1	309684.255001	1686372.865970	215.391	15.24657644	79.22794183
6	m.2	309458.678046	1686565.191480	210.333	15.24829783	79.22582759
7	m.3	309612.115403	1686769.480270	223.160	15.25015521	79.22724031
8	m.4	309850.320686	1686640.096460	220.851	15.24900352	79.22946734
9	pt..l.9	309850.739974	1686055.684540	198.255	15.24372241	79.22951546
10	pt.l..6	309771.107092	1686477.766200	210.762	15.24753078	79.22874231
11	pt.l..7	309710.440419	1686221.371340	204.684	15.24520936	79.22819703
12	pt.l..8	309838.790650	1686131.589830	201.660	15.24440746	79.22939850
13	pt.r..6	309761.388865	1686481.123110	211.402	15.24756040	79.22865159
14	pt.r..7	309700.264587	1686217.686740	204.084	15.24517531	79.22810260
15	pt.r..9	309830.520875	1686125.611920	200.828	15.24435283	79.22932198
16	pt.r.9	309840.771736	1686054.090870	198.017	15.24370727	79.22942280
17	r.7	309768.035392	1686487.453220	214.584	15.24761809	79.22871298

Mining Area	8.04 Ha
Saftey Zone Area	0.87 Ha
Road Area	0.48 Ha
Total Area	9.39 Ha

Legend
- DGPS Points
- Mining Area
- Saftey Zone Area
- Road Area

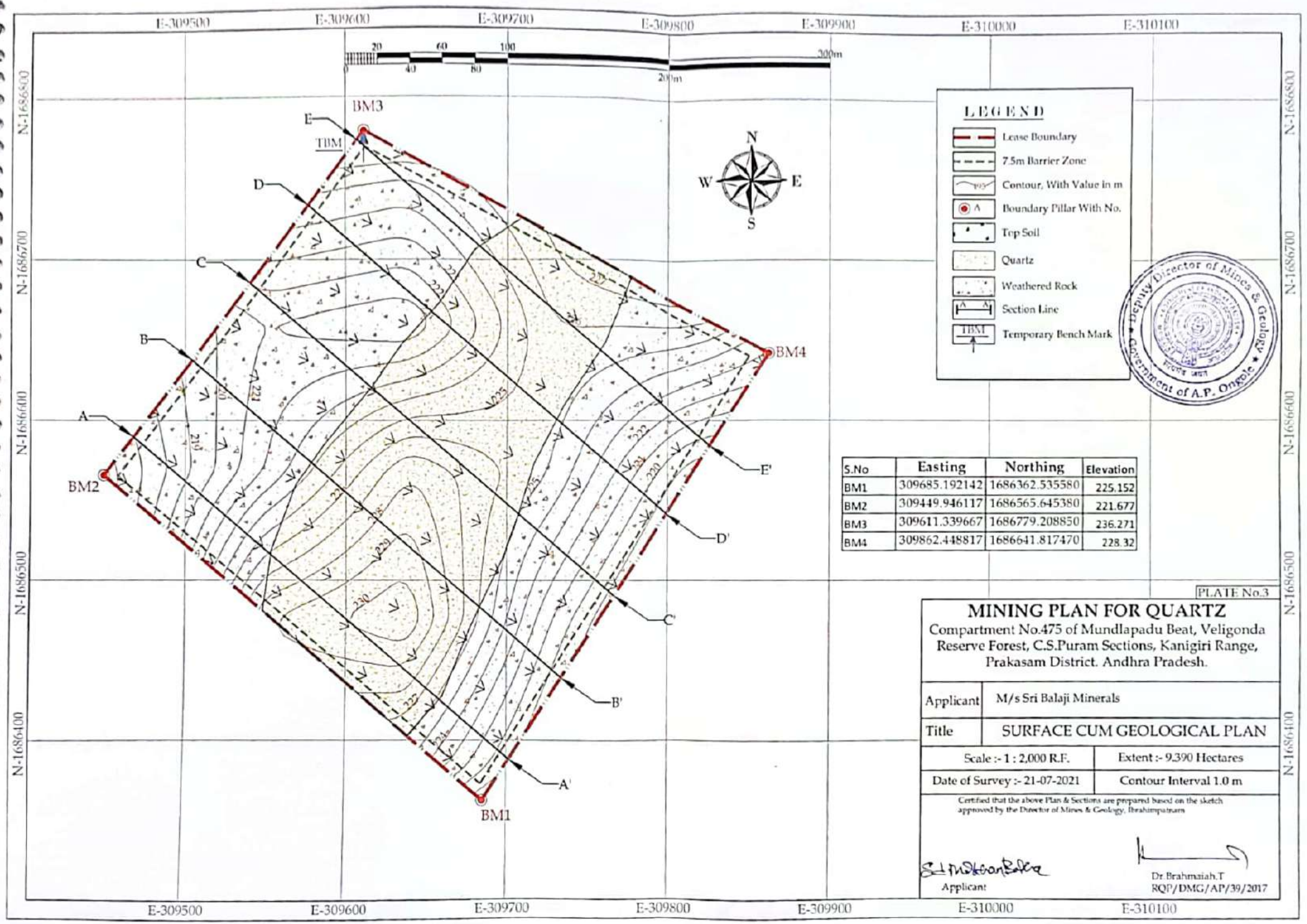
0 55 110 220 330 440 Meters

Deputy Director of Mines & Geology, Government of A.P. (Guntur)

Dr. Brahmaiah.T
M.Sc., Ph.D in Geology
RQP/DMG/AP/39/2017

Forest Range Officer (GIS)
O/o Pri. Chief Conservator of Forests (A.P)
Aranya Bhavan, Saifabad, Hyd-4.

The DGPS/GNSS/ETS data is only verified,the absolute location of Points shall be verified by the concerned field officer.



S.No	Easting	Northing	Elevation
BM1	309685.192142	1686362.535580	225.152
BM2	309449.946117	1686565.645380	221.677
BM3	309611.339667	1686779.208850	236.271
BM4	309862.448817	1686641.817470	228.32

PLATE No.3

MINING PLAN FOR QUARTZ

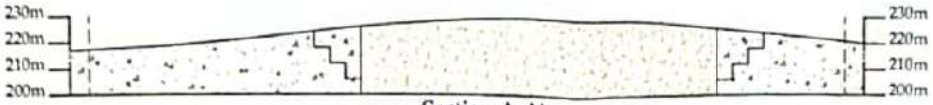
Compartment No.475 of Mundlapadu Beat, Veligonda Reserve Forest, C.S.Puram Sections, Kanigiri Range, Prakasam District. Andhra Pradesh.

Applicant	M/s Sri Balaji Minerals
Title	SURFACE CUM GEOLOGICAL PLAN
Scale :- 1 : 2,000 R.F.	Extent :- 9.390 Hectares
Date of Survey :- 21-07-2021	Contour Interval 1.0 m

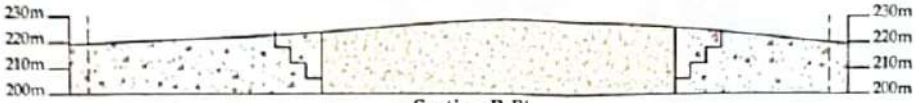
Certified that the above Plan & Sections are prepared based on the sketch approved by the Director of Mines & Geology, Ibrahimpatnam

Applicant

Dr Brahmaiah.T
RQP/DMG/AP/39/2017



Section A-A'



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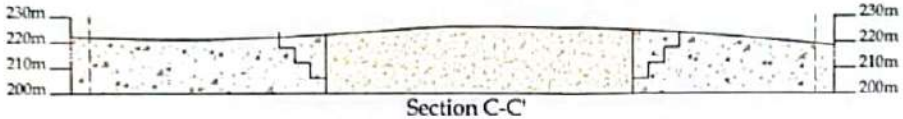

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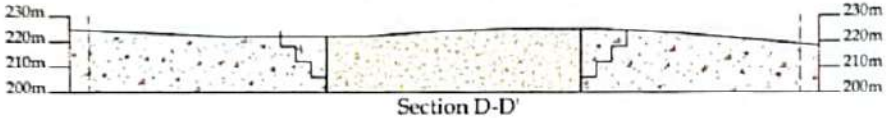
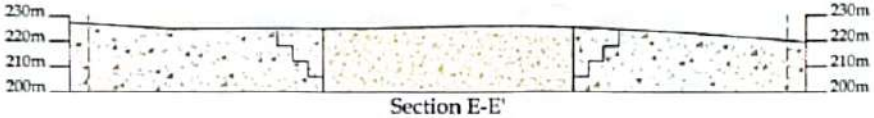


Section D-D'



Section E-E'

LEGEND

- Lease Boundary
- 7.5m Barrier Zone
- Weathered Rocks
- Quartz
- UPL

PLATE No.3A

MINING PLAN FOR QUARTZ

Compartment No.475 of Mundlapadu Beat, Veligonda Reserve Forest, C.S.Puram Sections, Kanigiri Range, Prakasam District. Andhra Pradesh.

Applicant	M/s Sri Balaji Minerals
Title	GEOLOGICAL CROSS SECTIONS
Scale :- 1 : 2,000 R.F.	Extent :- 9.390 Hectares
Date of Survey :- 21-07-2021	Contour Interval 1.0 m

Certified that the above Plan & Sections are prepared based on the sketch approved by the Director of Mines & Geology, Ibrahimpatnam

Applicant

Dr Brahmaiah.T
RQP/DMG/AP/39/2017

charges

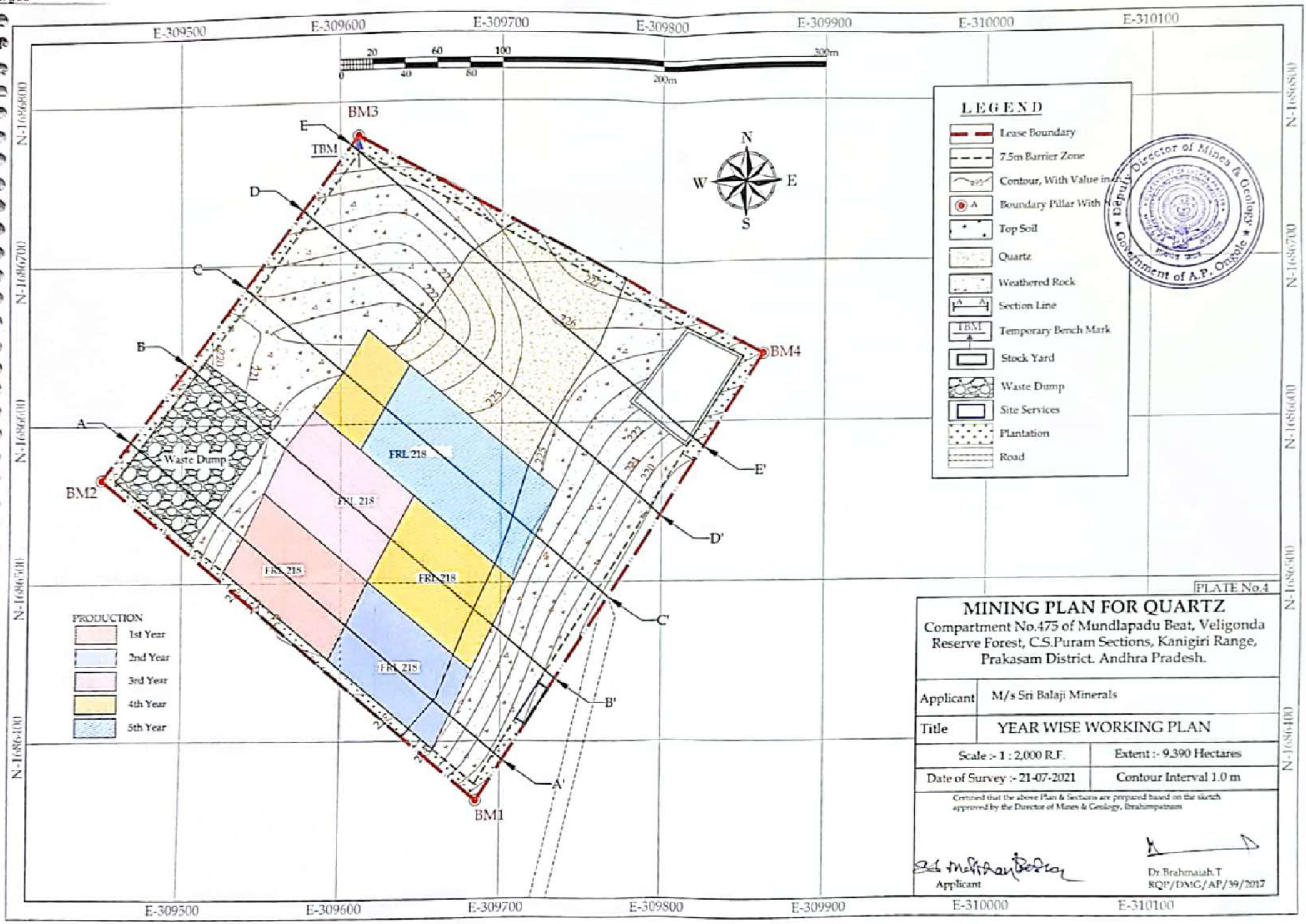


PLATE No.4

MINING PLAN FOR QUARTZ

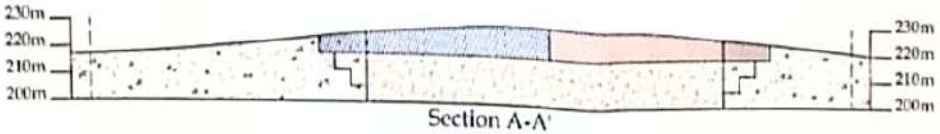
Compartment No.475 of Mundlapadu Beat, Veligonda Reserve Forest, C.S.Puram Sections, Kanigiri Range, Prakasam District. Andhra Pradesh.

Applicant	M/s Sri Balaji Minerals
Title	YEAR WISE WORKING PLAN
Scale :- 1 : 2,000 R.F.	Extent :- 9.390 Hectares
Date of Survey :- 21-07-2021	Contour Interval 1.0 m

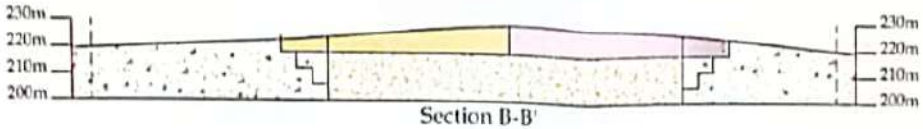
Certified that the above Plan & Sections are prepared based on the sketch approved by the Director of Mines & Geology, Brahmmpatnam

Applicant

Dr Brahmaiah.T
RQP/DMG/AP/39/2017



Section A-A'



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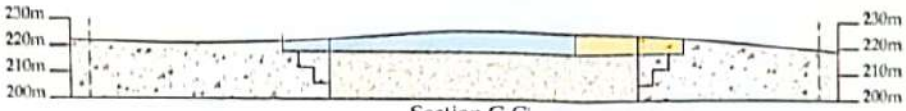
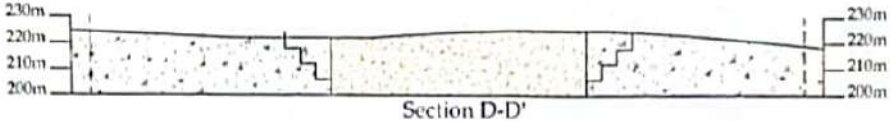


Section C-C'



Section D-D'

Section E-E'

PRODUCTION

- 1st Year
- 2nd Year
- 3rd Year
- 4th Year
- 5th Year

LEGEND

- Lease Boundary
- 7.5m Barrier Zone
- Weathered Rocks
- Quartz
- UPL

Deputy Director of Mines & Geology * Government of A.P. Ongole *

PLATE No.4A

MINING PLAN FOR QUARTZ

Compartment No.475 of Mundlapadu Beat, Veligonda Reserve Forest, C.S.Puram Sections, Kanigiri Range, Prakasam District. Andhra Pradesh.

Applicant	M/s Sri Balaji Minerals
Title	YEAR WISE WORKING SECTIONS
Scale :- 1 : 2,000 R.F.	Extent :- 9.390 Hectares
Date of Survey :- 21-07-2021	Contour Interval 1.0 m

Certified that the above Plan & Sections are prepared based on the sketch approved by the Director of Mines & Geology, Ibrahimpatnam

Applicant

Dr.Brahmaiah.T
RQP/DMG/AP/39/2017

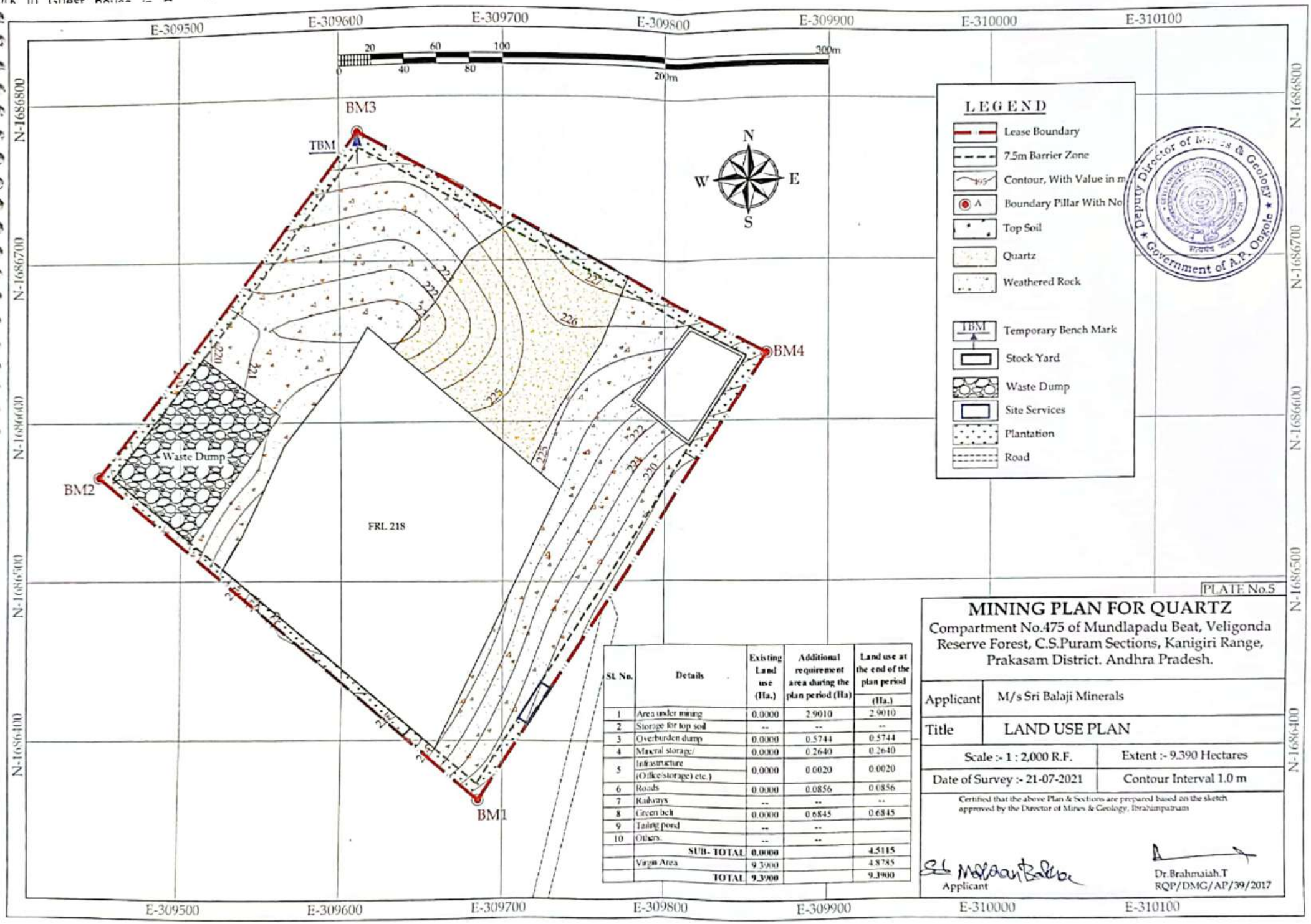


PLATE No.5

MINING PLAN FOR QUARTZ

Compartment No.475 of Mundlapadu Beat, Veligonda Reserve Forest, C.S.Puram Sections, Kanigiri Range, Prakasam District. Andhra Pradesh.

Applicant	M/s Sri Balaji Minerals
Title	LAND USE PLAN
Scale :- 1 : 2,000 R.F.	Extent :- 9.390 Hectares
Date of Survey :- 21-07-2021	Contour Interval 1.0 m

Certified that the above Plan & Sections are prepared based on the sketch approved by the Director of Mines & Geology, Ibrahimpatnam

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Sl. No.	Details	Existing Land use (Ha.)	Additional requirement area during the plan period (Ha)	Land use at the end of the plan period (Ha.)
1	Area under mining	0.0000	2.9010	2.9010
2	Storage for top soil	--	--	--
3	Overburden dump	0.0000	0.5744	0.5744
4	Mineral storage/	0.0000	0.2640	0.2640
5	Infrastructure (Office/storage) etc.)	0.0000	0.0020	0.0020
6	Roads	0.0000	0.0856	0.0856
7	Railways	--	--	--
8	Green belt	0.0000	0.6845	0.6845
9	Tailing pond	--	--	
10	Others.	--	--	
	SUB- TOTAL	0.0000		4.5115
	Virgin Area	9.3900		4.8785
	TOTAL	9.3900		9.3900

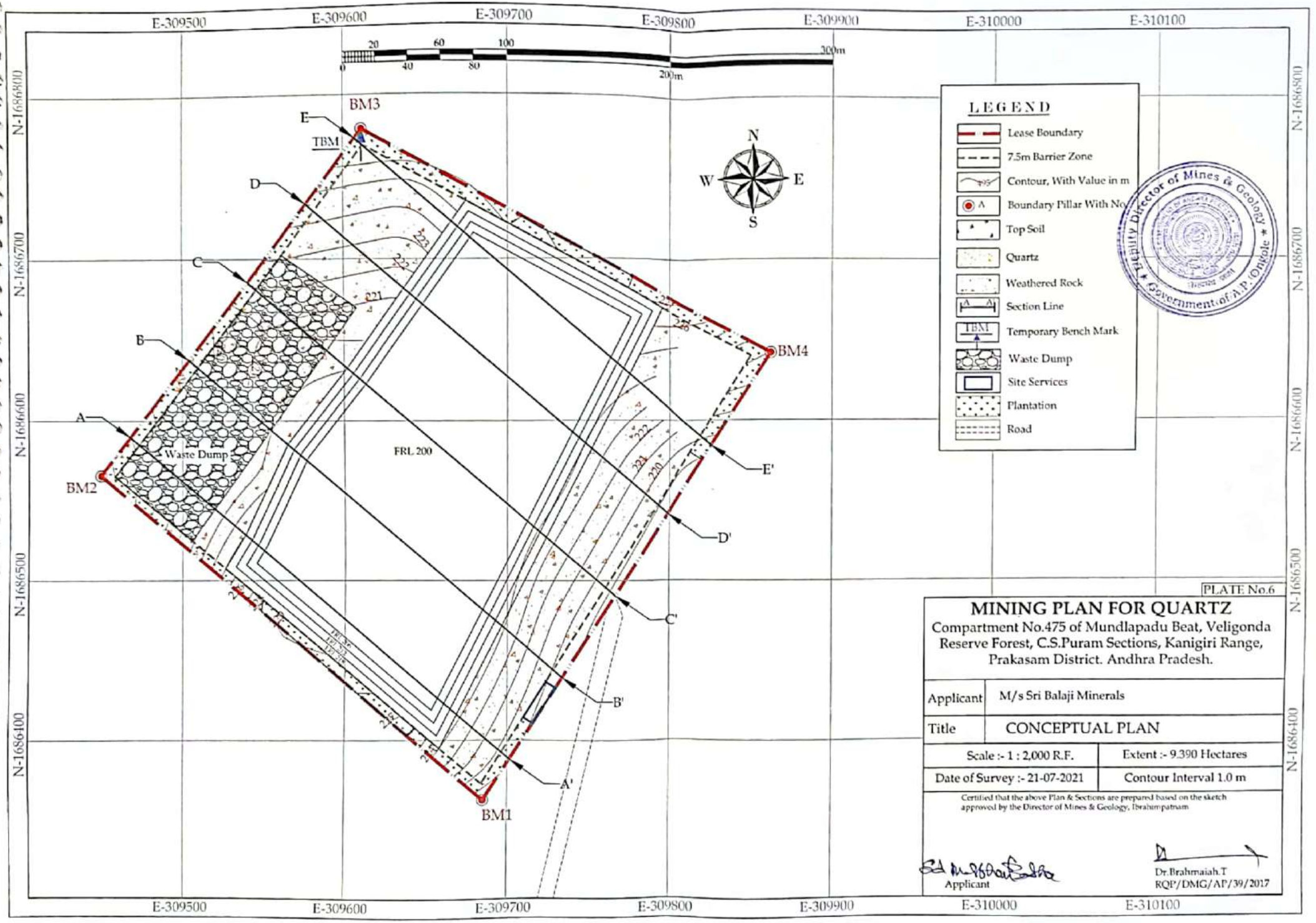

PLATE No.6

MINING PLAN FOR QUARTZ

Compartment No.475 of Mundlapadu Beat, Veligonda Reserve Forest, C.S.Puram Sections, Kanigiri Range, Prakasam District. Andhra Pradesh.

Applicant	M/s Sri Balaji Minerals
Title	CONCEPTUAL PLAN
Scale :- 1 : 2,000 R.F.	Extent :- 9.390 Hectares
Date of Survey :- 21-07-2021	Contour Interval 1.0 m

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Applicant

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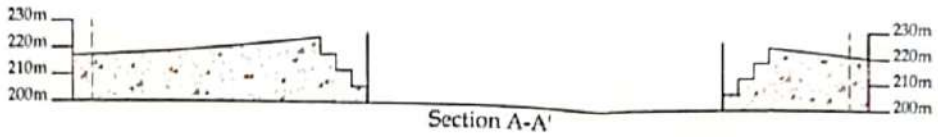
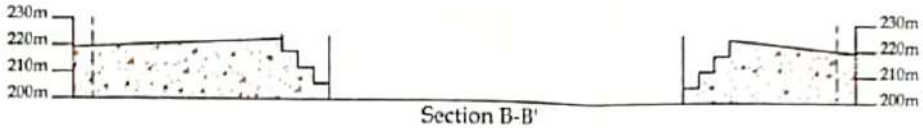
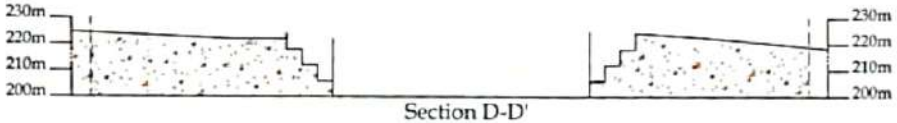


Section A-A'



Section B-B'

Section C-C'



Section D-D'

Section E-E'

PLATE No.6A

LEGEND

- Lease Boundary
- 7.5m Barrier Zone
- Weathered Rocks
- Quartz
- UPL

MINING PLAN FOR QUARTZ

Compartment No.475 of Mundlapadu Beat, Veligonda Reserve Forest, C.S.Puram Sections, Kanigiri Range, Prakasam District. Andhra Pradesh.

Applicant	M/s Sri Balaji Minerals
Title	CONCEPTUAL SECTIONS
Scale :- 1 : 2,000 R.F.	Extent :- 9.390 Hectares
Date of Survey :- 21-07-2021	Contour Interval 1.0 m

Certified that the above Plan & Sections are prepared based on the sketch approved by the Director of Mines & Geology, Ibrahimpatnam

Applicant

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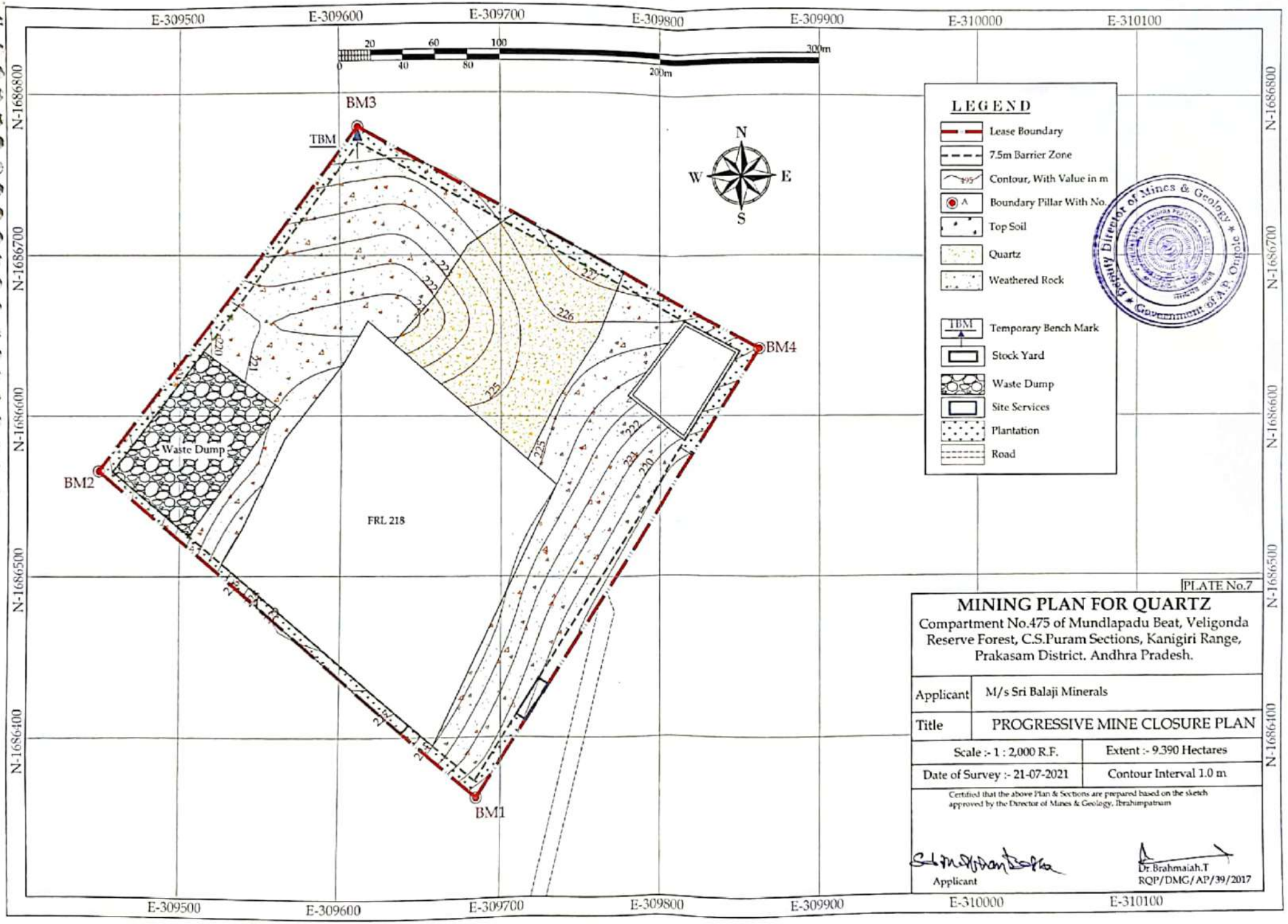

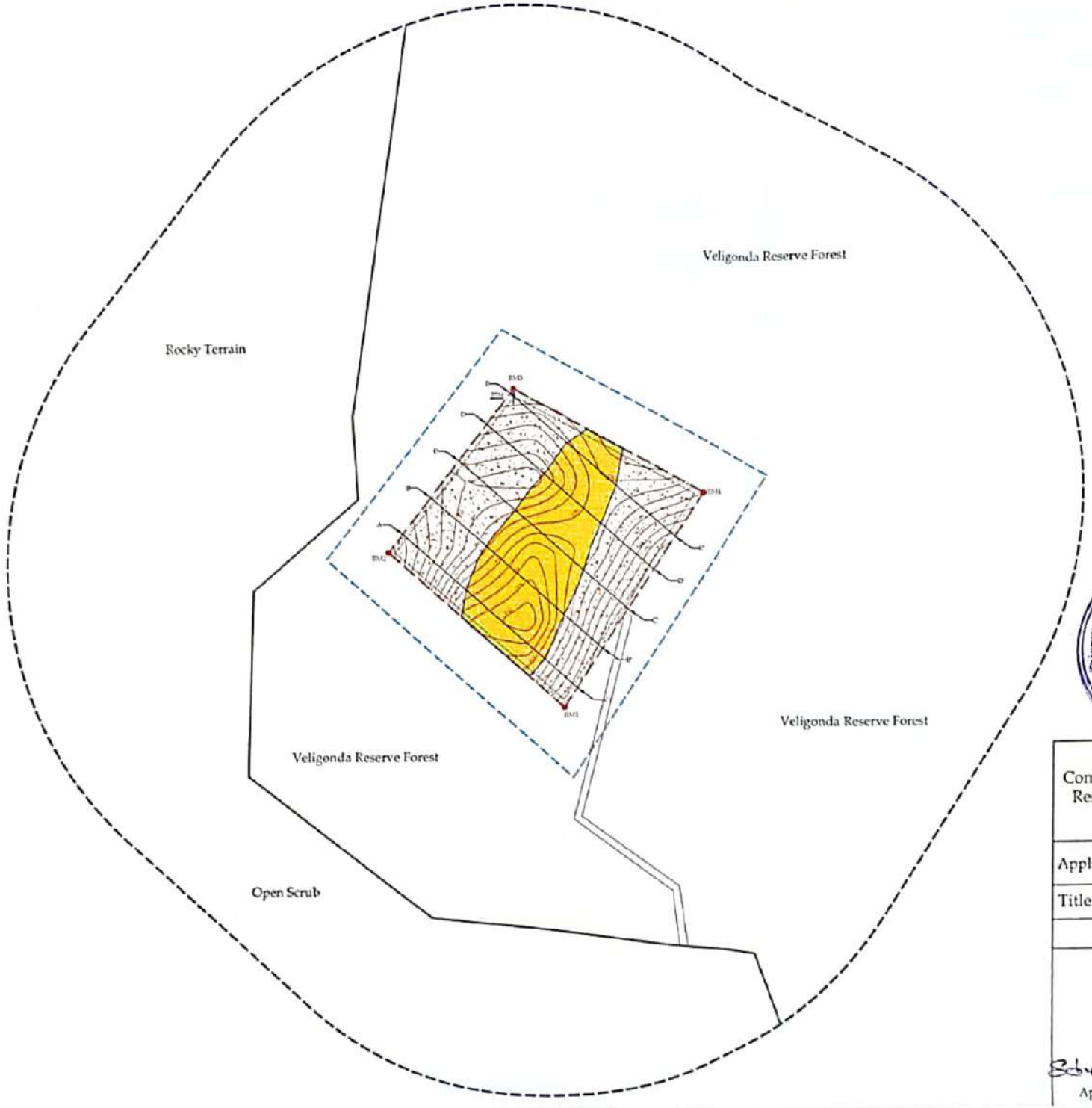

N

LEGEND

- Lease Boundary
- 7.5m Barrier Zone
- 495 Contour, With Value in m
- A Boundary Pillar With No.
- TBM Temporary Bench Mark
- Road
- Soil Cover
- Weathered Rocks
- Quartz
- 500M Line
- 60M Line
- Forest Boundary

Deputy Director of Mines & Geology, Ongole, Government of A.P.

PLATE No.8

MINING PLAN FOR QUARTZ

Compartment No.475 of Mundlapadu Beat, Veligonda Reserve Forest, C.S.Puram Sections, Kanigiri Range, Prakasam District. Andhra Pradesh.

Applicant	M/s Sri Balaji Minerals
Title	ENVIRONMENTAL PLAN
Scale :- 1 : 5,000 R.F.	Extent :- 9.390 Hectares
	Contour Interval 1.0 m

Applicant

Dr.Brahmaiah.T
RQP/DMG/AP/39/2017