Date: 03/08/2017

To,
THE CHAIRMAN
STATE ENVIRONMENT IMPACT ASSESSMENT AUTHORITY (SEIAA)
ANDHRA PRADESH,
A-3, INDUSTRIAL ESTATE, SANATHNAGAR
HYDERABAD.

Sir,

Sub: Environmental Clearance for Mine Lease Area over an extent of 4.048 Ha. in Sy. Nos. 195/4A2A, 195/4A2B & 195/4A3A (p) of Kolimigundla Village & Mandal, Kurnool District, Andhra Pradesh -Resubmission of application-Reg.

Ref:
1).Application submitted to SEAC on 01/11/2014
2).SEAC meeting held on 16/12/2014
3).Letter received from SEIAA vide Lr. No. SEIAA/AP/KNL-109/2014 Dated 12/01/2015
4) Reply submitted with proposed TOR on 24/04/2015
5) Letter received from SEIAA vide Lr. No.1530/SEIAA/AP/EC/2015-1217 Dated 29/05/2015.
6) Revised application submitted to SEIAA on 16/07/2015
7) TOR letter issued by SEIAA vide Lr. No. SEIAA/AP/KNL-106/2015-3948 dated; 16/09/2015
8) 92nd SEAC & 82nd SEIAA Minutes displayed in MOEF&CC website

With reference to above, we would like to bring to your kind notice that, we have submitted Form- I and Pre-feasibility report for Mine Lease Area over an extent of 4.048 Ha. in Sy. Nos. 195/4A2A, 195/4A2B & 195/4A3A (p) of Kolimigundla Village & Mandal, Kurnool District, Andhra Pradesh to SEIAA and accordingly SEIAA issue TOR for the Mine Lease area vide 7th reference cited above.

Now, with reference to the 8th cited above, now we are here with submitting Form- I and Environmental Management plan Pre-feasibility report and approved Mining scheme for your kind reference

We have already submitted a **DD for Rs.18,000/- through DD No.867000 dated 18/07/2016** drawn in favour of the Member Secretary, SEIAA, Andhra Pradesh for Environmental clearance processing fee.

We request your good selves to kindly consider our project under B2 category and issue Environmental clearance for Mine Lease area at the earliest.
Thanking you,

Yours faithfully,

For: Sri Sainath Minerals

P. Bayapu Reddy

P. Bayapu Reddy
Proprietor

AP VAT TIN : 37940299699
SRI SAINATH MINERALS
1/428, Sunkulamma Palem,
TADIPATRI - 515 411.

Office of the Asst. Director of
Mines and Geoloy
Banaganapalli. g

TO WHOM SO EVER IT MAY CONCERN

This is to certify that M/s Sri Sainath Minerals are having mining lease for limestone over an extent of 4.048 Hec, in Sy.No 195/4A2A, 195/4A2B,195/4A3A Part. Of Kolimigundla Village&Mandal, Kurnool District. The lease period from 22.08.2002 to 22.08.2022. As per this office records, the lessee has obtained and Dispatched the following quantites of Limestone minerals since from 01.04.2006 to 31.12.2016.

S.NO	Year	Quantity production and dispatch in Mt	Approved Quantity as per scheme of mining in Mt
		Limestone	
1	2006-07	48611 Mt	-
2	2007-08	40027 Mt	-
3	2008-09	29420 Mt	-
4	2009-10	33120 Mt	-
5	2010-11	28200 Mt	-
6	2011-12	23226 Mt	-
7	2012-13	169980 Mt	-
8	2013-14	106100 Mt	96000 Mt
9	2014-15	79450 Mt	96000 Mt
10	2015-16	94500 Mt	96000 Mt
11	2016-17(up to 31.12.2016	78500 Mt	96000 Mt

Asst. Director of Mines & Geology,
Banaganapalli.

Asst. Director of Mines & Geology,
Banaganapalle, Kurnool Dist.

जारी करने की शाखा / Issuing Branch: [illegible]
कोड क्र /CODE No: 00923
Tel No. 08558-226754

भारतीय स्टेट बैंक
State Bank of India

मांगड्राफ्ट
DEMAND DRAFT

Key: WICMIN
Sr. No: 867000

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मांगे जानेपर MEMBER SECREATARY,SEIAA,A.P FO R ENVIRONMENTAL PROCESSING FE या उनके आदेश पर

ON DEMAND PAY E********** OR ORDER

Eighteen Thousand Only

रुपये RUPEES

अदा करें ₹ 18000.00

IOI 000432237738 Key: WICMIN Sr. No: 867000 AMOUNT BELOW 18001(1/5) मूल्य प्राप्त / VALUE RECEIVED

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D. Naresh Kumar
P.F. 5859778, Special Letter
Assistant Manager
SBI, TADIPATRI Br. Code 923

शाखा प्रबंधक
BRANCH MANAGER

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REVISED FORM – I

Prepared for

Sri Sainath Minerals

[Mine Lease Area – 4.048 Ha.]

Sy. Nos.		**195/4A2A, 195/4A2B and 195/4A3A**
VILLAGE	**:**	**KOLIMIGUNDLA**
MANDAL	**:**	**KOLIMIGUNDLA**
DISTRICT	**:**	**KURNOOL**
STATE	**:**	**ANDHRA PRADESH**

PREPARED BY

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APPENDIX I
(See paragraph – 6)
FORM 1

(I)	**Basic Information**	
Sr. No		
(I)	**Basic Information**	
1	Name of the project	**M/s. Sri Sainath Minerals**
2	S. No. in the schedule	**1 (a)**
3	Proposed capacity/area/length/tonnage to be handled/command area/lease area/number of wells to be drilled	**4.048 Ha** **Limestone – 150,000 TPA**
4	New/Expansion/Modernization	**Operating Mine**
5	Existing capacity/Area etc.	**Not applicable**
6	Category of project i.e. 'A' or 'B'.	**B**
7	Does it attract the general condition? If yes, please specify.	**Not applicable**
8	Does it attract the specific condition? If yes, please specify.	**Not applicable**
9	Location	
	Plot/Survey/Khasra No.	**Sy.No: 195/4A2A, 195/4A2B and 195/4A3A**
	Village	**Kolimigundla**
	Tehsil/Mandal	**Kolimigundla**
	District	**Kurnool**
	State	**Andhra Pradesh**
10	Nearest railway station/airport along with distance in kms.	**Railway station: Tadipatri Railway station (24.2 Kms .)** **Airport : Satya sai airport (108.6 Kms.)**
11	Nearest Town, city, District Headquarters along with distance in kms	**Nearest Town : Tadipatri – 21.1 Kms** **Nearest District headquarters : Kurnool**
12	Village Panchayats,Zilla Parishad, Municipal corporation, Local body(complete postal addresses with telephone no.s to be given)	**Village panchayat :** **Kolimigundla Village,** **Kolimigumdla Mandal,** **Kurnool District.**
13	Name of the applicant	**M/s. Sri Sainath Minerals**
14	Registered Address	**P. Bayapu Reddy,** **1/423, Sunkulamma Palem, Tadpatri-515411, Ananthapur District, Andhra Pradesh.**
15.	Address for correspondence:	
	Name	**P. Bayapureddy**
	Designation(owner/partner/CEO)	**Proprietor**
	Address	**1/423, Sunkulamma Palem, Tadpatri-515411, Ananthapur District, Andhra Pradesh.**
	Pin code	**515411**
	E-Mail	**pbr.ssminerals@gmail.com**
	Telephone No.	**09440008718**
	Fax No.	**-**
16.	Details of Alternative sites examined, if any. Location these sites should be shown on a topo sheet	**No alternative sites have been considered.**

17.	Interlinked Projects	**No**
18.	Whether separate application of interlinked project has been submitted?	**No**
19.	If yes, date of submission	**Not applicable**
20.	If no, reason	**Not applicable**
21.	Whether the proposal involves approval/clearance under; if yes, details of the same and their status to be given. (a) The Forest (conservation)Act,1980 (b) The Wildlife(protection)Act,1972 (c) The C.R.Z Notification,1991?	**Not Applicable**
22.	Whether there is any a government order/policy relevant/relating to the site?	**Not Applicable**
23.	Forest land involved(hectares)	**Not Applicable**
24.	Whether there is any litigation pending against the project and/or land in which the project is propose to be set up? (a)Name of the court (b)Case No. (c) Orders/directions of the court, if any and its relevance with the proposed project.	**Not Applicable**

(II) ACTIVITY

1. Construction, operation or decommissioning of the Project involving actions, which will cause physical changes in the locality (topography, land use, changes in water bodies, etc.)

S.No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data
1.1	Permanent or temporary change in land use, land cover or topography including increase in intensity of land use (with respect to local land use plan)	**Yes**	**Temporary changes will occur due to mining operations.**
1.2	Clearance of existing land, vegetation and buildings?	**No**	**There are no permanent structures like vegetation and building within the Mining lease area.**
1.3	Creation of new land uses?	**Yes**	**The waste generated during pit formation, the mine waste will be dumped in the ML area.**
1.4	Pre-construction investigations e.g. bore houses, soil testing?	**Yes**	**Pre-construction investigations Have already been carried out in mine lease area.**

1.5	Construction works?	**No**	**Rest rooms, First Aid Room, Shelters and Lavatory were already provided.**
1.6	Demolition works?	**No**	**Not applicable**
1.7	Temporary sites used for construction works or housing of construction workers?	**No**	**Not applicable**
1.8	Above ground buildings, structures or earthworks including linear structures, cut and fill or excavations	**No**	**Not applicable**
1.9	Underground works including mining or tunneling?	**No**	**Not applicable**
1.10	Reclamation works?	**No**	**Not applicable**
1.11	Dredging?	**No**	**Not applicable**
1.12	Offshore structures?	**No**	**Not applicable**
1.13	Production and manufacturing processes?	**No**	**The proposed method of mining is by Opencast Semi Mechanized Mining Method other than fully mechanized.**
1.14	Facilities for storage of goods or materials?	**Yes**	**Limestone mineral will be stored at demarcated place.**
1.15	Facilities for treatment or disposal of solid waste or liquid effluents?	**Yes**	**The waste generated during pit formation, the mine waste will be dumped in the ML area. No liquid effluent generation from the mining operations. Only sanitary waste water will be generation.**
1.16	Facilities for long term housing of operational workers?	**No**	**No housing colony or township is proposed.**
1.17	New road, rail or sea traffic during construction or operation?	**Yes**	**Internal roads will be formed in the mining area for the transportation of Limestone through dump trucks.**
1.18	New road, rail, air waterborne or other transport infrastructure including new or altered routes and stations, ports, airports etc?	**No**	**Not applicable**
1.19	Closure or diversion of existing transport routes or infrastructure leading to changes in traffic movements?	**No**	**No closure or diversion of existing transport routes is envisaged.**
1.20	New or diverted transmission lines or pipelines?	**No**	**No new or diversion of transmission lines or pipe lines due to the mining activities**
1.21	Impoundment, damming, culverting, realignment or other changes to the	**No**	**Depth of the Ground water table is much below the ultimate depth of the**

	hydrology of watercourses or aquifers?		**Quarrying operations. Hence there will not be interference with the Ground water table.** **No culverting, realignment is envisaged. There will not be any changes to the hydrology of watercourses or aquifers.**
1.22	Stream crossings?	**No**	**No stream crossing is involved.**
1.23	Abstraction or transfers of water form ground or surface waters?	**Yes**	**Only rain water will be diverted through proper channels.**
1.24	Changes in water bodies or the land surface affecting drainage or run-off?	**No**	**Not applicable**
1.25	Transport of personnel or materials for construction, operation or decommissioning?	**Yes**	**Mined Limestone will be transported through dumpers or trucks.**
1.26	Long-term dismantling or decommissioning or restoration works?	**No**	**No such works are envisaged**
1.27	Ongoing activity during decommissioning which could have an impact on the environment?	**No**	**No such works are envisaged**
1.28	Influx of people to the area either temporarily or permanently?	**No**	**Not applicable**
1.29	Introduction of alien species?	**No**	**Not applicable**
1.30	Loss of native species or genetic diversity?	**No**	**Not applicable**
1.31	Any other actions?	**No**	**Nil**

2. Use of Natural resources for construction or operation of the Project (such as land, water, materials or energy, especially any resources which are non-renewable or in short supply):

S.No.	Information/checklist confirmation	Yes/No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data
2.1	Land especially undeveloped or agricultural land (ha)	**Yes**	**ML area granted is Government waste land.**
2.2	Water (expected source & competing users) unit: KLD	**Yes**	**The water required will be met from nearby bore well.**
2.3	Minerals (MT)	**No**	**Not applicable**
2.4	Construction material – stone, aggregates, sand / soil (expected source – MT)	**No**	**Not applicable**
2.5	Forests and timber (source – MT)	**No**	**Not applicable**
2.6	Energy including electricity and fuels (source, competing users) Unit: fuel (MT), energy (MW)	**No**	**Not applicable**

2.7	Any other natural resources (use appropriate standard units)	**No**	**Not applicable.**

3. Use, storage, transport, handling or production of substances or materials, which could be harmful to human health or the environment or raise concerns about actual or perceived risks to human health.

S.No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data
3.1	Use of substances or materials, which are hazardous (as per MSIHC rules) to human health or the environment (flora, fauna, and water supplies)	**No**	**The storages of all hazardous materials in the ML are much less and will be stored as per the Mines Rules & Regulation.**
3.2	Changes in occurrence of disease or affect disease vectors (e.g. insect or water borne diseases)	**No**	**Not applicable**
3.3	Affect the welfare of people e.g. by changing living conditions?	**No**	**Appropriate measures will be taken to prevent the escape of fugitive dust. Hence there will not be any impact on welfare of people.**
3.4	Vulnerable groups of people who could be affected by the project e.g. hospital patients, children, the elderly etc.,	**No**	**Dust will be the air pollutant in the mining operations.**
3.5	Any other causes	**No**	**Not applicable**

4. Production of solid wastes during construction or operation or decommissioning (MT/month)

S.No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data
4.1	Spoil, overburden or mine wastes	**Yes**	**If top soil encountered during mining operations will be used for afforestation work on the dumps.** **The waste generated during the mining will also be dumped in the ML area.**
4.2	Municipal waste (domestic and or commercial wastes)	**Yes**	**All Municipal Waste will be disposed as per norms.**
4.3	Hazardous wastes (as per Hazardous Waste Management Rules)	**No**	**Not applicable**
4.4	Other industrial process wastes	**No**	**Not applicable**
4.5	Surplus product	**No**	**Not applicable**
4.6	Sewage sludge or other sludge from	**No**	**Sanitary waste water generated will**

	effluent treatment		**be treated in septic tank followed by soak pit**
4.7	Construction or demolition wastes	**No**	**Not applicable**
4.8	Redundant machinery or equipment	**No**	**Not applicable**
4.9	Contaminated soils or other materials	**No**	**No contamination of soils.**
4.10	Agricultural wastes	**No**	**No agricultural wastes will be generated.**
4.11	Other solid wastes	**No**	**Not applicable**

5. Release of pollutants or any hazardous, toxic or noxious substances to air (Kg/hr)

S.No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data
5.1	Emissions from combustion of fossil fuels from stationary or mobile sources	**Yes**	**Vehicular emissions will be envisaged.**
5.2	Emissions from production processes	**Yes**	**The sources of emissions will be drilling & blasting. Dust will be air pollutant in the mining operations.**
5.3	Emissions from materials handling including storage or transport	**Yes**	**Dust will be emanated during material handling and generation of gaseous emissions (SO_2, NO_x) from vehicles used for transportation of Limestone.**
5.4	Emissions from construction activities including plant and equipment	**No**	**Not applicable**
5.5	Dust or odours from handling of materials including construction materials, sewage and waste	**Yes**	**No odour generation from mining operations.**
5.6	Emissions from incineration of waste	**No**	**Not applicable**
5.7	Emissions from burning of waste in open air (e.g. slash materials, construction debris).	**No**	**No burning of waste will be under taken. All such wastes will be disposed as per norms.**
5.8	Emissions from any other sources	**No**	**Nil**

6. Generation of Noise and Vibration, and Emissions of Light and Heat:

S.No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data with source of information data
6.1	From operation of equipment e.g. engines, ventilation plant, crushers	**Yes**	**Major sources of noise generation will be due to movement vehicles, drilling and blasting.**
6.2	From industrial or similar processes	**No**	**Nil**
6.3	From construction or demolition	**No**	**Not applicable**

6.4	From blasting or piling	**Yes**	**Precautions to be observed during blasting:** **<u>Blasting precautions:</u>** • **Proper charge per delay shall be regulated** • **Millisecond delay detonators or sequential blasting exclusively used.** • **Stemming column shall be more than the burden to avoid blown out shots.** • **Each blast would be is carefully planned, supervised executed and observed by expert staff.** • **To reduce the fly rocks vibrations, Noise control the delay detonators will be used.**
6.5	From construction or operational traffic	**Yes**	**The speed of the vehicles will be limited to 25 kmph. The noise levels of all Vehicles used during construction and operation will be in accordance with MOEF notification and its amendments.**
6.6	From lighting or cooling systems	**No**	**Not applicable**
6.7	From any other sources	**No**	**Not applicable**

7. Risks of contamination of land or water from releases of pollutants into the ground or into sewers, surface waters, groundwater, coastal waters or the sea:

S.No.	**Information/Checklist confirmation**	**Yes/No**	**Details thereof (with approximate quantities/rates, wherever possible) with source of information data**
7.1	From handling, storage, use or spillage of hazardous materials	**Yes**	**Diesel will be stored in designated area as per norms. Good housekeeping practices will be adopted.**
7.2	From discharge of sewage or other effluents to water or the land (expected mode and place of discharge)	**No**	**There will not be any waste water generation from mining operations. Only source of effluent generation will be sanitary waste water which will be treated in septic tank followed by subsurface dispersion.**
7.3	By deposition of pollutants emitted to air into the land or into water	**No**	**Dust will be the air pollutant in the mining operations. This will be controlled by dust suppression with the help of water sprinklers, water will be sprayed after every blast, controlling speed of dumpers /**

			tippers on haul roads. This will reduce the emissions.
7.4	From any other sources	**No**	**Not applicable**
7.5	Is there a risk of long term build up of pollutants in the environment from these sources?	**No**	**No such risks are anticipated.**

8. Risk of accidents during construction or operation of the Project, which could affect human health or the environment

S.No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data
8.1	From explosions, spillages, fires etc from storage, handling, use or production of hazardous substances	**Yes**	**Accident due to explosives or sabotage in case of magazine. Explosives will be stored in the Magazine.**
8.2	From any other causes	**Yes**	**Mine inundation, slope failure at the mine faces and accidents due to Mining machinery. These will be prevented by employing competent persons and educating them with latest safety aspects.**
8.3	Could the project be affected by natural disasters causing environmental damage (e.g. floods, earthquakes, landslides, cloudburst etc)?	**No**	**Not applicable**

9. Factors which should be considered (such as consequential development) which could lead to environmental effects or the potential for cumulative impacts with other existing or planned activities in the locality.

S. No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data
9.1	Lead to development of supporting. utilities, ancillary development or development stimulated by the project which could have impact on the environment e.g.: • Supporting infrastructure (roads, power supply, waste or waste water treatment, etc.) • housing development • extractive industries • supply industries • other	No	**No adverse impact on environment due to ancillary development.**

9.2	Lead to after-use of the site, which could have an impact on the environment	No	**Not applicable**
9.3	Set a precedent for later developments	Yes	**With the progress of the mining activity socio economic development will take place and helps in overall upliftment of the socio economic status of the people in the area.**
9.4	Have cumulative effects due to proximity to other existing or planned projects with similar effect	No	**Not applicable**

(III) Environmental Sensitivity			
S.No.	**Areas**	**Name/ Identity**	**Aerial distance (within 15 km.) Proposed project location boundary**
1	Areas protected under international conventions, national or local legislation for their ecological, landscape, cultural or other related value	**Nil**	**Not applicable**
2	Areas which are important or sensitive for ecological reasons - Wetlands, watercourses or other water bodies, coastal zone, biospheres, mountains, forests	**Nil**	**Not applicable**
3	Areas used by protected, important or sensitive species of flora or fauna for breeding, nesting, foraging, resting, over wintering, migration	**Nil**	**Not applicable**
4	Inland, coastal, marine or underground waters	**Under ground water**	**60 m below the ground level.**
5	State, National boundaries	**Nil**	**Not applicable**
6	Routes or facilities used by the public for access to recreation or other tourist, pilgrim areas	**SH-27** **SH-57**	**7.0 Kms.** **1.6 Kms.**
7	Defence installations	**Nil**	**Not applicable**
8	Densely populated or built-up area	**Nil**	**Not applicable**
9	Areas occupied by sensitive man-made land uses *(hospitals, schools, places of worship, community facilities)*	**Kolimigundla** **Narasimha swamy temple**	**1.1 Kms.** **0.4 Kms.**
10	Areas containing important, high quality or scarce resources *(ground water resources, surface resources, forestry, agriculture, fisheries, tourism, minerals)*	**Owk Reservior** **Timmaraju Cheruvu** **Timmanayani Cheruvu** **Mada Vagu** **Erra vagu** **Belum caves** **SRBC canal**	**13.7 Kms** **10.6 Kms** **6.5 Kms** **1.6 Kms** **8.9 Kms** **3.0 Kms.** **6.3 Kms.**
11	Areas already subjected to pollution or	**Nil**	**Not applicable**

	environmental damage. *(those where existing legal environmental standards are exceeded)*		
12	Areas susceptible to natural hazard which could cause the project to present environmental problems (*earthquakes, subsidence, landslides, erosion, flooding or extreme or adverse climatic conditions*)	**Nil**	**Based on the historical data, the site is not likely to prone to earthquakes, floods, etc.**

IV). **Proposed Terms of Reference.**

It is a Mine Lease Area of < 25 Ha, we humbly request to consider the project under B-2 category and accord us the Environmental Clearance.

"I hereby giving undertaking that the data and information given in the application and enclosures are true to the best of my knowledge and belief and I am aware that if any part of the data and information submitted is found to be false or misleading at any stage, the project will be rejected and clearance give, if any to the project will be revoked at our risk and cost.

Date: 03/08/2017

Place: **Tadipatri**

P. Bayapureddy

Name & Signature of the Proponent

Sri Sainath Minerals

P. Bayapureddy
Proprietor
1/423, Sunkulamma Palem,
Tadpatri-515411.

AP VAT TIN : 37940299699
SRI SAINATH MINERALS
1/428, Sunkulamma Palem,
TADIPATRI - 515 411.

REVISED

PRE-FEASIBILITY REPORT

For

M/s. Sri Sainath Minerals,
SY. NO. 195/4A2A, 195/4A2B and 195/4A3A
Kolimigundla Village,
Kolimigundla Mandal,
Kurnool District.

INDEX

1.0 EXECUTIVE SUMMARY

INTRODUCTION:

M/s. Sri Sainath Minerals, possess a mining lease of Kolimigundla Limestone Mine to win Limestone Ore in Sy.No. 195/4A, 2A, 195/4A2B and 195/4A3A(P) of Kolimigundla Village & Mandal, Kurnool District, over an extent of 4.048 Ha.

The mining lease was originally granted on 23.08.2002 and the lease will be expired on 22.08.2022. The mining plan was prepared and approved by IBM vide Letter No. AP/KNL/MP/LST-78/HYD, dated 05.06.2002**.**The mining operations were commenced from 23-08-2002.

The Kolimigundla Limestone Mine of M/s. Sri Sainath Minerals has transferred the partial portion of the lease area due to financial & technical problems to M/s S.J.K. Steel Plant over an extent of 7.875Ha in Sy.No.191/A1, 191/A2, 188/3 and 195/4A3A(P) of Kolimigundla Village & Mandal, Kurnool District, Andhra Pradesh. The remaining portion of the lease area is retained by the M/s. Sri Sainath Minerals over an extent of 4.048Ha in Sy.No. 195/4A2A, 195/4A2B, 195/4A3A (P). The proceeding vide Letter No. 1360/M4/2006, dated 15-11-2006.

A modification in the mining plan including progressive mine closure plan was prepared under Rule 22(6) of MCR, 1960 and 23 (B) of MCDR, 1988 for reduce the lease area from 11.923Ha to 4.048 Ha for the period of 2012-13 to 2016-17 and approved vide Letter No. AP/KNL/MP/Lst-78/HYD, dated 25.01.2013.

Now, the lessee is submitting the Review of Mining Plan under Rule 17(2) of MCR, 2016 for approval for the period 2017-18 to 2021-22. The mining scheme was approved by IBM vide Letter No. AP/KNL/MP/LST-78/HYD, dated 15.12.2016 .

Project Description:

Site Description:

The mining lease area is for Limestone excavation in 4.048 hectares. The ML area is in Sy. No. 195/4A2A, 195/4A2B and 195/4A3A of Kolimigundla Village, Kolimigundla Mandal, Kurnool District, Andhra Pradesh.

Choice of Fuel:

No fuel will be used in the proposed mining activity.

Common Facilities:

The common facilities such as Resting shelter, Fir Aid facilities, Drinking water facilities and will be provided in the ML area.

Source & Availability of water:

Water is required for dust suppression, Green belt development and for domestic purposes. Water for the mining activity is sourced from nearby borewell.

Pollution Control Measures:

The air emission of concern from this mining activity is dust generation. Applying water for dust suppression on mine haul roads. Planting of trees along main mine haul roads will help in mitigating the air emissions. There is no waste water generation from the mine.

2.0 INTRODUCTION OF THE PROJECT / BACKGROUND INFORMATION

Identification of project and Project Proponent:

The mining activity is for extraction of Limestone over an extent of 4.048 hectares. The ML area is in Sy. No. 195/4A2A, 195/4A2B and 195/4A3A of Kolimigundla Village, Kolimigundla Mandal, Kurnool District, Andhra Pradesh.

The Promoters

The mining activity is for mining of Limestone, would be undertaken by P. Bayapureddy, Proprietor.

Need for the project and importance to the region

India is the World's second largest producer of cement with 130 large cement plants having a capacity totaling 165.4 million tons in 2005-2006, domestic consumption was around 135 million tonnes (based on domestic dispatches from large plants). Karnataka ranks 7th in terms of production of cement in the country. There are 16 Cement industries in Karnataka producing around 11 million tons per annum of cement (which is around 6.51 % of India's production). The export of cement from Karnataka was 0.01 Million Tons. Cement demand in the country grows at roughly 1.5 times the GDP growth rate. It is predicted that the cement production in India would rise to 236.16 MT in FY11. It's also expected to rise to 262.61 MT in FY12.

Transporting cement, a bulk commodity, it over long distances is uneconomical. For this reason the increase in production proposed by M/s SICL, shall benefit the southern region. This has resulted in cement being largely a regional play with the industry divided into five main regions. north, south, west, east and the central region. The southern region accounts for the largest share in overall production (29 per cent) due to the vast availability of limestone. This is followed by the northern (21 per cent) and the western regions (19 per cent). Cement consumption varies across regions due to the differences in the demand-supply balance, per capita income and the level of industrial development in each state.

The National Highways Development Project (NHDP) includes the 5,846 km Golden Quadrilateral (GQ) and the 7,300 km North-South, East-West (NS-EW) corridor. In addition, upgradation of rural roads, upgradation to four/six lanes of about 13,000 km of National Highways and 10,000 km of additional highways have been initiated.

The NHDP is expected to lay a significant part of the roads in cement concrete. Thus, if 25 per cent of the roads of East-West corridors are laid by concrete, it is likely to lead to an incremental demand of 5-6 million tonnes of Cement per annum. Likewise, the Golden Quadrilateral is expected to add 4-5 million tonnes of demand per annum. The total demand from these road projects is expected to generate an incremental growth of 4-5 per cent per annum over the next 2-3 years. To fill the above gaps in supply and demand positions in cement, it is essential to have capacity addition for existing cement plants, for which M/s SICL is expanding it mining .

This mine shall provide employment for about 350 people by both direct employment which include mine officials, skilled, semi skilled and unskilled labour and indirect employment, in contractual works. The lessee shall extend social benefits like drinking water health care measure, educational benefits to the neighboring villagers in addition to his own employees. Further, this expansion project is expected to yield a positive impact on the socio-economic environment of the region. It helps in sustainable development of this area including further development of physical infrastructural facilities.

Also by this increased production of limestone, the country achieves the revenue in terms of taxes on cement and exchequer revenue for the State in terms of royalty etc.

Demand-Supply Gap:

The demand for Cement is closely related to the growth in the construction sector. Consequently, cement demand has been posting a healthy growth rate of around 8 per cent since 1997-98, propelled by the increased thrust on infrastructure development, and the higher demand from the housing sector and industrial projects. This trend is likely to continue in the coming years. The Indian cement industry has registered a record production of more than 1253 lakh tonnes during 04-05. The per capita consumption of 102 kg as compared to the world average of 260 kg,

450 kg in China and 631 kg in Japan underlines the tremendous scope for growth in the Indian Cement industry in the long term. Limited capacity additions and high demand will narrow the demand-supply position. Cement production in India has increased at a CAGR of above 8 per cent during the last decade with a production level of 125.3 million tonnes in 2004-05. The end-users of the Cement industry include housing, infrastructure and corporate segments. While government demand (for infrastructure) accounts for around 25 per cent of the total demand, the share of the housing sector accounts to more than 50 per cent of the total cement.

According to CRISIL estimates, given the demand-supply gap of roughly 40 million tonnes, capacity addition is expected over the next five years. Of this, almost 30 million tonnes will be met through Greenfield, Brownfield expansions and 10 million tones through blending. The capacity addition of 30 million tonnes would require an investment of around US$ 2.2 billion

Imports vs Indigenous production :

The import of Cement is under Open General License (OGL) and anyone can import the requisite quantity provided it conforms to the BIS standards. In order to augment domestic availability of cement, the import duty on cement was brought down to Nil from 12.5% as on 21st January, 2007. The Government has also introduced a dual excise duty structure on cement (excise duty of Rs.600 per metric tonne of cement with MRP more than Rs.190 per bag and excise duty of Rs.300 PMT on cement with MRP of Rs.190 or less per bag. In addition to the above, the Ministry of Finance has removed the countervailing duty (equivalent to the excise duty and special additional custom duty of 4% on cement w.e.f. 3rd April, 2007). The importers have to adhere to the Cement (Quality Control) Order, 2003, which provides for mandatory BIS Certification. India has already imported 2.1 million tones of cement from neighboring Pakistan and in total, it was planned to import about seven million tonnes of cement by 2009-10, that's the surplus that they have. This move was taken by the government to tame the surging inflation that hit

Export Possibility:

Indian Cement Industry has seen both ups and downs. However, its competitiveness and tendency to grow for achieving a technologically sound status has helped the industry see an impressive increase in export. Today, export of Indian cement may see further growth on account of an expected increase in production and consumption level. The industry is predicted to grow by 9 to 10% along with bringing stabilization in rates.

Domestic / Export Markets:

According to statistics, cement industry will have the capacity to produce additional 111 million tonnes of cement by the end of the year 2009-10 (FY 10). The forecast has been made taking in account 141 outstanding cement projects.

During 2007-08, the export of cement from India touched the 2.16 million tonnes mark. However during 2008-09, the cement export from India stood at 1.46 million tonnes. In spite of seeing fall during 2008-09, the export segment of the industry is expected to grow again on account of various infrastructure projects that are being taken up all over the world.

Employment generation (Direct & Indirect): The following personnel will be employed for mining in this area.

SL. NO.	CATEGORY OF PERSONS	NUMBER
1	Mines Manager cum Engineer	1
2	Geologist	1
3	Skilled labours	2
4	Semi-Skilled Labours	2
5	Unskilled	23
Total		**29**

3.0 PROJECT DESCRIPTION

Type of project including interlinked and interdependent projects, if any.

The mining activity is for extraction of Limestone over an extent of 4.048 hectares. The ML area is in Sy. No. 195/4A2A, 195/4A2B and 195/4A3A of Kolimigundla Village, Kolimigundla Mandal, Kurnool District, Andhra Pradesh.

Location

The Mine Lease area is located Kolimigundla Village, Kolimigundla Mandal, Kurnool District, Andhra Pradesh.The Latitude and Longitude of the lease boundary corner pillars readings are taken by the using of GPS is given below.

GPS READINGS OF THE LEASE BOUNDARY PILLARS		
Boundary Pillar	**Latitude**	**Longitude**
BP-1	N15°04'43.80"	E078°07'19.60"
BP-2	N15°04'42.08"	E078°07'21.60"
BP-3	N15°04'41.63"	E078°07'26.30"
BP-4	N15°04'40.90"	E078°07'29.60"
BP-5	N15°04'36.70"	E078°07'29.00"
BP-6	N15°04'34.90"	E078°07'26.90"
BP-7	N15°04'35.20"	E078°07'24.00"
BP-8	N15°04'36.10"	E078°07'23.60"

BP-9	N15°04'35.30″	E078°07'22.90"
BP-10	N15°04'34.90"	E078°07'20.40"
BP-11	N15°04'41.10"	E078°07'21.20"
BP-12	N15°04'42.60″	E078°07'19.20"
GPS Used: Garmin map 76CSx **Map Datum:** WGS-84		

Size or Magnitude of Operation

The project will be for extraction of Limestone of 1,50,000 TPA.

Regional Geology

The Kolimigundla area (the subject area) is part of the Kurnool Sub-basin of the Cuddapah Basin. The rocks of the Cuddapah Basin including the Kurnool Sub-basin belong to the Meso to Neoproterozoic Era. Gneisses and granitoids with enlaves of greenstone belts from the basement to the rocks of the Cuddapah Basin. The contract between the basement and the Cuddapah rocks is marked by a profound unconformity well known in the geological literature as "Eparchaean unconformity".

The rocks of the Kurnool Sub-basin overlie the Cuddapah rocks with an unconformity. Narji Limestone and Koilkuntla Limestone along with other formations are part of the stratigraphic sequence of the Kurnool rocks. The former is the host of all grades of limestone used in the cement and metallurgical industries. There is another sub-basin in the north-eastern part of the Cuddapah basin and is known as Palnad sub-basin. There is profound lithological similarity between the two sub-basins, and the dominant rock type in both the basins is limestone.

The regional stratigraphy in respect of the rocks of the Kurnool Group is given below.

Kurnool Group	**Kurnool Sub-Basin Thickness**	**Palnad Sub-Basin Thickness**
Nandyal Shale	50–100m	30–50m
Koilkuntla Limestone	15–50m	10–30m
Paniam Quartzite	5–15m	5–10m
Auk Shale	5–15m	3–5m
Narji Limestone	100–200m	300–350m
Banganapalle Quartzite	5–20m	5–25m

Rocks of the Kurnool Group have sub-horizontal bedding and have almost blanket geometry. Out of the different formations of this group only the Narji Limestone, which is named after the

place Nididizuvvi (Narji), is economic importance in respect of cement industry. It is the treasure house of cement grade limestone. At a few places, SMS grade is also present. Number of cement plants in the State of Andhra Pradesh thrive on the vast limestone deposits available within the Narji Limestone. The Narji Limestone is basically divided in to three Units viz.,

Upper flaggy limestone: Flaggy nature due to some argillaceous matter.

Middle massive limestone: Compact and breaks with cochoidal fracture.

Lower flaggy limestone: Flaggy nature due to some argillaceous matter.

It is mostly the massive unit that forms the backbone of the cement industry in the area. The flaggy limestone generally finds its use as building-stone.

Geology of the lease area:

The subject area exposes the middle massive limestone unit. The limestone here is gray-dark gray, hard, compact and fine grained (micrite). It is traversed by very thin (<0.1 cm) quartz veins. Limestone has stylolites, which indicate homogeneity of the rock.

And towards south-east of the area Limestone belongs slightly flaggy because of increase in argillaceous component. The trend of the bedding in general is NNE-SSW and E-W. the bedding grades from 10^0-15^0 towards South East. The subjected area is also partly covered by patches of black cotton soil. The thickness of the black cotton soil is less than 1m and is noticed mainly in the south-western part of the area.

Thickness of the Limestone:

The thickness of the limestone has been found based on the geological cross-sections. The field information has been collected and geological cross-sections are drawn along the core boreholes. From the cross-sections, the overall thickness has been calculated considering the width and the dip of the formation and it is found to be 25m on an average.

Origin:

It is a sedimentary rock formed as a chemical precipitate in a starved Kurnool sub-basin. The dark colour of limestone indicates the euxinic condition of formation. The grain size is very fine. On petrographic consideration, it can be classified as micrite. The rock gives metallic sound when hit with a hammer.

Details of Prospecting/Exploration already carried out:

In the modification of the mining period, the lessee has explored the area with 1 No of working pit for exploration of Limestone, upto a depth of 11.3m from the surface.

The details of working pits depth and locations

EXISTING WORKING PITS LOCATIONS						
SL.NO.	**WORKING PIT ID**	**NORTHING**	**EASTING**	**L X W X D (Max RL-Min RL)**	**LITHOLOGY**	**Remarks**
1	WP-1	1668825 to 1668960	190677 to 190872	136 X 196 X 11.3 (261.4-250.1)	0-0.5m Soil 0.5-11.3m Limestone	Refer **Annexure-X & XA**

In the mining plan period, the lessee has explored the area with 4 No's of core boreholes for exploration of Limestone, upto a depth of 12-25m from the surface.

The details of drilled core boreholes depth & location

YEAR	**BOREHOLE ID**	**DEPTH IN M**	**CO-ORDINATES**	
			EASTING	**NORTHING**
2013-14	CBH-1	25	190833	1668954
	CBH-2	25	190683	1668952
	CBH-3	18	190675	1668829
	CBH-4	12	190847	1668822

And during the period 2016-17, the lessee has explored the area with 4 No's of DTH boreholes in order to access the depth of the ore. These boreholes were drilled to a depth of 23-30m from the surface.

The details of drilled DTH boreholes depth & location

YEAR	**BOREHOLE ID**	**DEPTH IN M**	**CO-ORDINATES**	
			EASTING	**NORTHING**
2016-17	DTH-1	30	190611	1668974
	DTH-2	29	190678	1668778
	DTH-3	26	190745	1668778
	DTH-4	23	190829	1668809

Future programme of exploration programme planned in next five years as in table below:

During this proposed review of mining plan period 2 No's of boreholes are proposed in the pit to know the extent of the ore.

The year-wise boreholes proposals

YEAR	BOREHOLE ID	DEPTH IN M	CO-ORDINATES	
			EASTING	NORTHING
2017-18	PDTH-1	20	E 190786.0390	N 1668888.8529
	PDTH-2	20	E 190721.0745	N 1668865.3832

The summary of year-wise proposals

Year	No. Of Boreholes (Core/RC/DTH)	Grid interval	Total meterage	No. of Pits dimensions and volume	No. of Trenches, dimensions and volume
2017-18	2 (PDTH)	--	40	---	---
2018-19	---	--	--	---	---
2019-20	---	--	--	---	---
2020-21	---	---	---	---	---
2021-22	---	---	---	---	---

Reserves and Resources

The reserves are furnished according to the MEMC Rules, the cutoff grade and threshold values considered for reserves estimation. For the ascertaining of UNFC code following procedure is adopted.

i) The category of the deposit as per MEMC Rules comes under Category-I of Stratiform & Tabular Deposit of Regular Habit.

ii) The status of exploration is taken as G1 scale of exploration, because lessee has explored the area with 1 no of working pit,4 No's of core boreholes& 4 No's of DTH boreholes in a closed interval grid pattern. The Limestone is proved in three-dimensional view in working pit and the area enclosed in 1 no of working pit, 4 No's of core boreholes& 4 No's of DTH boreholes in less than 200m X 200m interval are considered for G1 scale of exploration. The depth of the limestone is proved upto a maximum 30 mfrom the surface by the exploration of DTH bore hole No. -1 as shown in the section D-D'. But depth of the UPL is considered upto 236MRL only based on the existing parameter as per the sections. The ore body exposed in the pit varies from 11.3m depth from the surface in the pitand upto 12-30m depth in the boreholes. Hence, it is geologically explored which is considered as Geological Axis '1'.

iii) For Blasting and loading, about 29 employees are required. The approximate estimated cost towards production is **Rs.210/-** per ton. However, there is good demand in market for all grade and size and the usual selling price will be ranging between 350-400 rupees per ton as per the

market fluctuation, so Limestone is economically viable. But as the lessee has not obtained any clearance for environment, consent for establishment & consent for operation, it is considered as pre-feasible which is taken as Feasible Axis '2'.

iv) Based on the exploration with existing working pit, trail pits and its analysis, review of mining plan period is prepared as per the provisions & will be submitted to the IBM. The reserves have been ascertained above economic cut-off grade i.e. CaO-35% (Min), MgO-4% (Max), SiO_2–18% (Max) & Alkalies-0.5%(Max) and by considering all above factors the mining is economical. Hence it is considered as Economical Axis '1' & Reserves are blocked in UPL & 7.5m safety zone barrier code is considered for economical axis is 2.

v) The combining of EFG axis the UNFC code for reserves is assigned as 121.

The data of mineral exposed in three dimensional views of the working pit, core & DTH boreholes in the mining area is taken into consideration for reserve estimation.

The estimation of ore reserves is made by using cross-section method using cross-sectional area method. The geological cross sections are prepared at an interval of 50m, across the strike of the ore body. The area of individual litho-units in each cross section is measured and multiplying sectional interval and tonnage is arrived by multiplying with its bulk density.

The bulk density is considered as 2.25t/Cu.M for Limestone & 2.0t/Cu.M for waste with recovery taken as 98% and 2% for intercalated waste, the resources and reserves are estimated as per UNFC guidelines.

Proved Mineral Reserves (G1 scale of exploration) are the reserves established based on the 1 No of working pit, 4 No's of core boreholes& 4 No's of DTH boreholes at an interval of 200m x 200m, the limestone deposits are exposed in the three dimensions which is explored during the previous excavation of the area is considered as Proved Mineral Reserves UNFC code is taken as 121.

Blocked mineral reserves in UPL & 7.5m safety zone barrier UNFC code is considered as 221.

The detailed summary of Geological Reserve/Resource as on 26.07.2016.

Level of Exploration	**Resource in million tonnes**	**Grade**
	Limestone	**CaO**
G1–Detailed Exploration	1.79	46.68%
TOTAL	**1.79**	

The threshold limit of IBM for Limestone is CaO-35% (Min), MgO-4% (Max), SiO_2–18% (Max) &

Alkalies-0.5 %(Max).

The detailed section-wise areas, volume calculations of geological reserves/resource are tabulated in a tabular form are enclosed in the following table

The detailed calculations of Geological Reserves & Resources

DETAILED CALCULATIONS FOR GEOLOGICAL RESERVE/RESOURCE FOR KOLIMIGUNDLA LIMESTONE MINE									
LIMESTONE						TOP SOIL			
Sections	**Area in m²**	**Sectional Influence in m**	**Volume in m³**	**Qty @ B.D. 2.25 with Rec 98% in tonnes**	**Intercalated waste @ B.D. 2.0 with Rec 2% in tonnes**	**Area in m²**	**Volume in m³**	**Qty @ Rec 100% & B.D. 2.0 in tonnes**	**Total Waste in Tonnes**
AA'	1,362	50	68,085	150,127	2,723	7	339	678	3,401
BB'	3,021	50	151,062	333,091	6,042	8	391	782	6,825
CC'	4,484	50	224,212	494,387	8,968	32	1,614	3,228	12,197
DD'	5,397	50	269,859	595,040	10,794	72	3,584	7,168	17,963
EE'	2,042	50	102,109	225,151	4,084	37	1,834	3,669	7,753
Total in Tonnes				**1,797,796**	**32,613**			**15,525**	**48,138**
Total in Million Tonnes				**1.79**	**0.03**			**0.02**	**0.05**

Based on the exploration, available measured field data, exposure in the lease area and adjoining area entire geological sections are updated and ore reserves have been freshly-estimated as on **10.10.2016.**

The Summary of Mineable Reserve

CATEGORY	RESOURCE IN MILLION TONNES	GRADE
	LIMESTONE	CaO
Proved Mineral Reserves (121)	1.03	46.68%
TOTAL	**1.03**	

The detailed calculations of Mineable Reserves

DETAILED CALCULATIONS FOR MINEABLE RESERVE FOR KOLIMIGUNDLA LIMESTONE MINE									
LIMESTONE						TOP SOIL			
Sections	**Area in m²**	**Sectional Influence in m**	**Volume in m³**	**Qty @ B.D. 2.25 with Rec 98% in tonnes**	**Intercalated waste @ B.D. 2.0 with Rec 2% in tonnes**	**Area in m²**	**Volume in m³**	**Qty @ Rec 100% & B.D. 2.0 in tonnes**	**Total Waste in Tonnes**
AA'	402	50	20,105	44,331	804	2	86	172	976
BB'	2,018	50	100,879	222,439	4,035	-	-	-	4,035
CC'	3,375	50	168,754	372,102	6,750	22	1,090	2,180	8,930
DD'	2,849	50	142,467	314,139	5,699	45	2,231	4,462	10,161
EE'	740	50	36,985	81,551	1,479	28	1,378	2,756	4,235
Total in tonnes				**1,034,563**	**18,768**			**9,570**	**28,338**

Total in million tonnes	**1.03**	**0.02**			**0.01**	**0.03**

The Summary of Blocked Reserves & Resources

CATEGORY	RESOURCE IN MILLION TONS	SCALE OF EXPLORATION
	LIMESTONE	
Feasibility Mineral Resources (221)	0.76	G1
TOTAL	**0.76**	

The detailed calculations of Blocked Reserves

DETAILED CALCULATIONS FOR BLOCKED RESERVE OUTSIDE THE ULTIMATE PIT LIMIT& WITHIN THE SAFETY ZONE OF KOLIMIGUNDLA LIMESTONE MINE									
G-1 SCALE OF EXPLORATION (UNFC CATEGORY-221)									
LIMESTONE						TOP SOIL			Total Waste in Tonnes
Sections	Area in m²	Sectional Influence in m	Volume in m³	Qty @ B.D. 2.25 with Rec 98% in tonnes	Intercalated waste @ B.D. 2.0 with Rec 2% in tonnes	Area in m²	Volume in m³	Qty @ Rec 100% & B.D. 2.0 in tonnes	
AA'	503	50	25,174	55,508	1,007	0.1	6	13	1,020
BB'	457	50	22f,873	50,434	915	-	-	-	915
CC'	611	50	30,543	67,348	1,222	0.3	13	25	1,247
DD'	1,087	50	54,335	119,808	2,173	0.6	30	61	2,234
EE'	810	50	40,514	89,332	1,621	0.2	12	23	1,644
Total in tonnes				**382,430**	**6,938**			**122**	**7,059**
Total in million tonnes				**0.38**	**0.01**			**0.0001**	**0.01**

DETAILED CALCULATIONS FOR BLOCKED RESERVE BEYOND THE SAFETY ZONE OF KOLIMIGUNDLA LIMESTONE MINE									
LIMESTONE						TOP SOIL			Total Waste in Tonnes
Sections	Area in m²	Sectional Influence in m	Volume in m³	Qty @ B.D. 2.25 with Rec 98% in tonnes	Intercalated waste @ B.D. 2.0 with Rec 2% in tonnes	Area in m²	Volume in m³	Qty @ Rec 100% & B.D. 2.0 in tonnes	
AA'	456	50	22,806	50,288	912	5	246	493	1,405
BB'	546	50	27,279	60,150	1,091	8	391	782	1,873
CC'	498	50	24,915	54,937	997	10	511	1,023	2,019
DD'	1,461	50	73,058	161,092	2,922	26	1,323	2,646	5,568
EE'	492	50	24,611	54,268	984	9	445	889	1,874
Total in tonnes				**380,735**	**6,907**			**5,833**	**12,739**
Total in million tonnes				**0.38**	**0.01**			**0.01**	**0.01**

Mineral Reserves/Resources: Mineral Resources: (Mineral resources may be estimated purely based on level exploration, with reference to the threshold value of minerals declared by IBM)

Summary of Mineral Reserves/Resources

Level of Exploration	Resource in million tons	Grade
	Limestone	
Proved Mineral Reserves (121)	1.03	46.68%
Feasibility Mineral Resources (221)	0.76	
TOTAL	**1.79**	

The total category- wise updated reserves and resource as on 10.10.2016

Classification	UNFC Code	Quantity in Million Tonnes	Grade		
(1)	(2)	(3)	(4)		
Total Mineral Resources (A + B)		**Limestone**	**CaO%**	**MgO%**	**SiO_2**
A. Mineral Reserve					
(1) Proved Mineral Reserve	111	--	--	--	--
(2) Probable Mineral Reserve	121	1.03	46.68%	2.26%	11.7 %
B. Remaining Resources					
(1) Feasibility Mineral Resource	221	0.76	46.68%	2.26%	11.7 %
(2) Prefeasibility Mineral Resource	222	--	--	--	--
(3) Measured Mineral Resource	331	--	--	--	--
(4) Indicated Mineral Resource	332	--	--	--	--
(5) Inferred Mineral Resource	333	--	--	--	--
(6) Reconnaissance Mineral Resource	334	--	--	--	--
Total		**1.79**			

MINING

OPEN CAST MINING:

The mine was worked with open cast Other than fully mechanized category 'A'. The mining operations and workings are adopted by keeping 3m bench height and the width is 6m. One working pit is opened in the past period in the lease area Mining workings are carried out by IR drilling and blasting. Drilling IR is done by using compressor.

Now, in the proposed review of mining plan in order to operate the mine opencast other than fully mechanised method will be followed. The working operation will be continued from the same pit it will extend in all the directions for extraction of the mineral. The bench height of 3m and the width will be not less than 6m will be maintained. The blasting will be undertaken by controlled blasting with millisecond delay detonators.

The drilling will be done with the IR and the blasting with slurry explosive, with controlled blasting. The blasted/excavated mineral is loaded by excavators into the tippers of 10ton capacity and transported directly to the consumer or buyer. The excavator will be used for extraction and loading of the mineral & waste. The bench slope will be maintained 45^0 slope. The waste generating as intercalated waste will be dumped in the temporary dump in the demarcated place as shown in the Proposed Production & Development Plan and later utilized for road

development purpose for transport within the mine. The top-soil generated will be temporarily stored in a predetermined area within the lease, later it will be utilized for afforestation purposes. The benches are formed directly in the ore body only. The Limestone Pit will be continued from Pit-1 in the lease area.

The general ground water table is found at a depth of about 90m from the surface in the surrounding areas. The mining operations may reach upto maximum depth of 27m from the surface & bottom Level upto 236m RL, which is above the ground water table. Hence, no ground water table is likely to be encountered throughout the life of the mine. The water table is below 90m from surface.

MINE MACHINERIES

The list of required mining machineries for proposed production & drilling blasting planning, currently being used is given in the below table.

Sl.No.	Equipment / Machinery	No of Units	Capacity
1	Tippers /Trucks	3	10T
2	IR drilling machine	2	83 mm dia, 100 cfm
3	Water Tankers	1	10,000 lit
4	Excavator	3	1.6 Cu.M
5	Front End Loader	2	2.6 Cu.M

The transport of ore from mine head to various customers is through hired tippers or trucks by road from plant.

Drilling:

During review of mining plan period, the maximum handling estimated is about 1,50,000 Tonnes of ore, 2,721 Tonnes of waste in the year 2020-21. Out of this, about 80% of handling shall require for drilling and blasting. For developing 3m height bench the actual drilling requires 3.3m per hole (10% extra drilling to remove toe as sub grade drilling). The drilling will be done by IR drilling machine with 32mm dia.

Total material handled (max) shall be 1,50,000 + 2,721 = 1,52,721(Ore + Waste) tonnes in every year. The drilling and blasting is only 80%.

For developing 3m height bench the actual drilling requires 3.3m per hole.

The number of drilling units required per year is calculations the below.

Depth of the hole -- 3.3m

Burden	--	1.5m
Spacing	--	2.0m
Avg. Bulk density	--	2.125t/Cu.M
Total material blasted per hole	=	Burden X Spacing X Depth X Bulk Density
	=	1.5m x 2.0m x 3.3m x 80% efficiency x 2.125t/Cu.M
	=	**16.83 Tonnes**
Therefore, rock broken/meter	=	**16.83**Tonnes/3.3m = 5.1Tonnes/m
Drilling meterage required/yr	=	152,721 Tonnes / 5.1 Tonnes/m = 29,945m
Drilling required per day	=	29,945m/300days = 99.82m/day

Driller can drill 60m/day

No. of drills required = total Meterage required to be drill per day/ machine can drill per day.

= 99.82/60m = 1.66 No's.

Hence, two number of IR drilling machines is adequate for drilling or it can hire whenever drilling operation required.

Blasting Parameters:

Blasting: The blasting will be carried out by series blasting with parallel rows of minimum 2No's, the slurry explosive will be used for blasting, the millisecond delay detonators will be used for blasting to avoid vibration and flying fragments. The maximum number of holes blasted per day will be 15No's. The firing will be done by electrical blasting with millisecond delay detonators with controlled blasting techniques. The change per hole will be maximum 3.6kg.

Quantity broken/ hole = 1.5m x 2.0m x 3.3m x 80% efficiency x 2.125t/Cu.M

= 16.83 Tonnes.

Powder factor = 4.68 tonnes/kg.

Blasting Pattern:

The blast design may have the average burden and spacing of 1m and 1.5m respectively. The charge per hole shall be about 3.6kg including 3.32kg ammonium nitrate and 1kg slurry.

At a time 15 holes shall be blasted and the maximum charge per delay shall be about 25kg. However, the blast design would be optimized for minimum vibration, noise and throw.

Type of explosives to be used:

The slurry explosives with safety fuse would be used for blasting. The prills of ammonium nitrate with diesel as fuel would be used to load the blast hole as column charge along with booster and explosives. For blasting shock tube initiation device, would also be used.

Precautions to be observed during drilling and blasting:

Drilling precautions:

- Wet Drilling is adopted.
- 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 precautions:

- Proper charge per delay shall be regulated
- Millisecond delay detonators or sequential blasting exclusively used.
- Stemming column shall be more than the burden to avoid blown out shots.
- Each blast would be being carefully planned, supervised executed and observed by expert staff.
- To reduce the fly rocks vibrations, Noise control the delay detonators will be used.

Powder factor in ore and over burden/waste/development heading/stope

Powder Factor:

The volume of rock broken per kg of explosive is, (3.3m is depth of the hole, 1.5m is the Burden, 2.0m is Spacing, 80% is the efficiency, 2.125t/cum is Avg. Bulk Density) = 3.3m x 1.5m x 2.0m x 80% x 2.125t/Cu.M= 16.83 Tonnes.

Therefore, charge/hole	=	16.83tonnes/4.68tonnes/kg= 3.6Kg.
Total drilling meterage is 29,945m		
The number of hole required is	=	29,945m/3.3m = 9,074 No's
Total explosive required is	=	9,074 x 3.6 = 32,666kg
The yield per hole is	=	1.5 x 2.0 x 3.3 X 2.125 X 0.80 = 16.83Tonnes
Power factor	=	16.83 Tonnes/3.60kg = 4.68.

The secondary blasting will not be there. If any boulder comes with excavator it will be broken or with by hammer manually it will be broken.

Storage of explosives:

The blasting will be given to outsourcing to the authorized agency who having the valid explosive license from the Explosive commissioner. The storage of explosive is not proposing in

the lease area as the authorized agency directly will bring the explosive and blasted the drilled holes and takes back the un-used explosive from the mine.

The tippers requirement calculated as under:

The maximum handling estimated is about 1,50,000 tonnes of Limestone Ore, 2,721 Tonnes of waste and 3,742 Tonnes of top soil in the year 2020-21.

=1,56,463 Tonnes/300 days/7 hours per day /6 trips per tipper/10 Tonnes =1.24 No's = ~2 No's.

Assuming 80% availability and spare considering the tipper, requirement is 3 No's.

The requirement of excavators is calculated as under:

The bucket capacity of the excavator available is 1.6m^3. The average bulk density of ore and waste is considered as 2.125 tonnes/Cu.M.

The loading capacity of the Excavator (tonnes / hour) = Excavator bucket capacity (m^3) X passes in minutes X 60 minutes X 90% efficiency X Avg. Bulk Density

=1.6 m^3 X 2 pass/ minutes X 60 X 90% X 2.125

= 367.20Tonnes/hour

Say 367 Tonnes/hour is the loading capacity of the excavator. Therefore, maximum to be handle 2020-21.

Total 156,463(150,000 + 2,721 + 3,742) = 156,463 (Ore +Waste + Top Soil)tonnes to handle max in one year.

The requirement of excavators is calculated as under.

i.e. 156,463 tonnes / 300 days = 521.54 tonnes/day

Therefore, for 7 hours effective working hours, the handling shall be

521.54 tonnes/day / 7 hours = 74.51tonnes/hour

As one excavator handle 367 tonnes/hour minimum one excavator is required to cater the need.

The requirement of front head loader is calculated as under:

The front head loader is required to handle the minerals and reject in the crushing and screening plant for loading and stack maintenance.

The loading capacity of the front head loader (tonnes / hour) =

Front end loader bucket capacity (m^3) X filling factor (%) X loose density (Tonnes/m3) X passes in minutes X 60 minutes X 80% efficiency X Avg. Bulk Density =

2.6 m^3 X 2 pass/ minutes X 60 minutes X 80% X 2.125= 530.4 tonnes/hour

However, 530 tonnes / hour is the loading capacity of the front-end loader.

Therefore, to handle maximum 150,000 + 2,721 + 3,742= 156,463 (Ore + waste + Top Soil) = 156,463 max in a year. The requirement of loader is calculated as under.

i.e. 156,463 tonnes / 300 days = 521.54 Tonnes/day

Therefore, for 7 hours effective working hours, the handling shall be

521.54 Tonnes / 7 hours = 74.51Tonnes/hour

As one loader handle, can load 74.51Tonnes/hour, minimum one front end loader is required to cater the need.

Year-wise tentative Excavation in Cubic Meters indicating development, ROM, pit wise as in table below.

(I)Insitu Tentative Excavation

As Per proposed exploration the depth persistence may increase so that the reserves may increase, it gives the longer mining operation is possible.

During the Review of Mining plan period working will be done from sections, A-A' to E-E' and the mining depth will vary from 261mRL to 237mRL in the Limestone. The year wise proposed production and development details are furnished in the following table

Year	Pit No.	Total Tentative Excavation (Cu.M)	ROM (Cu.M)		ROM Waste Ratio	Top Soil (Cu.M)
			Ore (Cu.M) *	Intercalated Waste (Cu.M)		
1	**2**	**3**	**7**	**6**	**10**	
2017-18	1	68,028	66,667	1,361	1:0.02	**4**
2018-19	1	68,277	66,667	1,361	1:0.02	--
2019-20	1	68,315	66,667	1,361	1:0.02	249
2020-21	1	69,899	66,667	1,361	1:0.05	287
2021-22	1	68,197	66,667	1,361	1:0.02	1,871

* Tentative tonnage of the ore may be arrived by computing approximate bulk density of 2.25 for ore and 2.00 for waste and recovery factor of 98% as these data are variable and may be established on time series.

Detailed calculations of year-wise production and development reserves

DETAILED CALCULATIONS OF PRODUCTION & DEVELOPMENT FOR KOLIMIGUNDLA LIMESTONE MINE										
	LIMESTONE						TOP SOIL			
Year	Section	Area in m²	Influence in m	Volume in m³	Quantity in tonnes Rec 98% & B.D. 2.25	Intercalated waste Qty in tonnes 2% Rec	Area in m²	Volume in m³	Qty in tonnes @ Rec 100% & B.D. 2.0	Total Waste in tonnes
2017-18	AA'	156	50	7,792	17,181	312	-	-	-	312
	BB'	1,205	50	60,236	132,819	2,409	-	-	-	2,409
2018-19	BB'	336	50	16,817	37,082	673	-	-	-	673
	CC'	1,024	50	51,210	112,918	2,048	5	249	497	2,546

2019-20	CC'	1,361	50	68,027	150,000	2,721	6	287	574	3,295
2020-21	CC'	339	50	16,936	37,343	677	7	361	722	1,400
	DD'	1,022	50	51,092	112,657	2,044	30	1,510	3,020	5,064
2021-22	EE'	1,361	50	68,027	150,000	2,721	3	169	338	3,059
Total in tonnes					**750,000**	**13,605**			**5,152**	**18,758**
Total in Million tonnes					**0.75**	**0.01**			**0.01**	**0.02**

4.0 SITE ANALYSIS

Connectivity

COMPONENT	DESCRIPTION
Road	The ML area is situated at 1.1 Km distance from Kolimigundla Village road.
Rail	Tadipatri – 24.2 Kms.
Air	Satya sai airport – 108.6 Kms.
Sea Port	Krishnapatnam port – 234 Kms.

Existing land use pattern

M/s. Sri Sainath Minerals proposes extraction of Limestone over an extent of 4.048 Ha, Sy No. Sy. No. 195/4A2A, 195/4A2B and 195/4A3A of Kolimigundla Village, Kolimigundla Mandal, Kurnool District, Andhra Pradesh. which is Govt. Land. No forest area is involved.

Topography

The lease area is a plain ground with a very gentle slope towards south and east. The topographic plan of the leasehold area with a contour interval of one meter. The topography of the map shows the area a general slope towards south and caste. A minor stream cuts across the terrain and flows towards southeast.

Existing infrastructure

Rest rooms, First Aid Room, Shelters and Lavatory.

Soil Classification

The area is mostly with Black Cotton.

Climatic data from secondary sources

Kurnool district generally has dry climate. The average rain fall in this region is about 400-450mm annually. The lies in semi-arid region where climate is characterised by hot and humid summer,

moderate monsoon and mild winter season. Summer is typically from March to June, when temperature ranges from a maximum of 47°c during day time to a minimum of 27°c at night. Winter from December to February. The rainfall does not disturb the mining activities. Moderate wind velocity prevailed in North East -South West direction.

Social Infrastructure available

Basic facilities like bus, train and road facilities are available in nearby villages and Mandal.

5.0 PLANNING BRIEF

Planning Concept

The mine involves extraction of Limestone.

Population Projection

Total population of Kolimigundla is 4844. Males are 2498 and Females are 2346 living in 1210 Houses.

Assessment of Infrastructure Demand (Physical & Social)

The road facility already available will be used and maintained. The labour required in mining will be taken from the nearby villages and they will be trained for the requirement in mine.

Amenities/Facilities

Communication facility like Mobile Phone connectivity will be provided at ML area. Other amenities for workers and staff shall be provided outside the mining area.

6.0 PROPOSED INFRASTRUCTURE

Industrial Area (Processing Area)

Mining at conceptual stage is 4.048 Ha.

Residential Area (Non Processing Area)

There is no proposal for residential area in the ML area or outside the ML area.

Green Belt

The plantation will be taken up in the Buffer zone of the ML area and along the approach road.
In buffer zone 640 sapling will be planted, out of which 150 sapling already planted in the buffer zoen of ML area and sapling was planted on either side of the approach road.
The sapling to be planted will be Neem, Mango, Subabul, Ganuga etc.,

Social Infrastructure

The project proponent will extend social benefits like providing drinking water, health care measures, educational support to the neighbouring villagers. .

Thus, this project is expected to yield a positive impact on the socio-economic environment of the area. It helps in sustainable development of this area including further development of physical & social infrastructural facilities.

Connectivity

COMPONENT	DESCRIPTION
Road	The ML area is situated at 1.1 Km distance from Kolimigundla Village road.
Rail	Tadipatri – 24.2 Kms.
Air	Satya sai airport – 108.6 Kms.
Sea Port	Krishnapatnam port – 234 Kms.

Drinking water management

Drinking water will be met from the nearby Bore Wells.

Sewerage system

The sewage generated from the toilets provided for the employees, will be connected to septic tank followed by sub surface dispersion.

Industrial waste management

No waste water generation from mining activity.

Power Requirement & Supply / source

Power requirement for mine will be met from APSEB grid.

7.0 REHABILITATION AND RESETTLEMENT (R & R) PLAN

As the ML area granted is Govt. land, hence no rehabilitation or resettlement plan is required as there are no habitations in the in the ML area.

8.0 PROJECT COST

The cost of Rest shelter, road formation, and other amenities such as, First –Aid Station etc., and machinery is Rs. 100.0 Lakhs.

9. ANALYSIS OF PROPOSALS (FINAL RECOMMENDATIONS)

The proposed mining activity will be beneficial financially and socially considering the project cost, mining costs, environmental cost, cost on health & safety and the various community improvement activities planned. This mine will provide employment about 29 people by direct employment which include mine officials, skilled, semi-skilled and unskilled labour. The project proponent will extend social benefits like providing drinking water, health care measures, educational support to the neighbouring villagers.

Thus, this project is expected to yield a positive impact on the socio-economic environment of the area. It helps in sustainable development of this area including further development of physical & social infrastructural facilities.

Hence, the proposed Lime stone excavation will have positive impact, improved culture in the region, improved economics to the State & Nation at large.

Sri Sainath Minerals

(Mine Lease Area – 4.048 Ha.)

Sy. Nos. 195/4A2A, 195/4A2B and 195/4A3A
KOLIMIGUNDLA VILLAGE
KOLIMIGUNDLA MANDAL
KURNOOL DISTRICT
ANDHRA PRADESH

ENVIRONMENT MANAGEMENT PLAN

PREPARED BY

PIONEER ENVIRO
LABORATORIES & CONSULTANTS PVT. LTD.

ISO 9001: 2008 Certified

Accredited by NABET

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1.0 INTRODUCTION

M/s. Sri Sainath Minerals, possess a mining lease of Kolimigundla Limestone Mine to win Limestone Ore in Sy.No. 195/4A, 2A, 195/4A2B and 195/4A3A(P) of Kolimigundla Village & Mandal, Kurnool District, over an extent of 4.048 Ha.

The mining lease was originally granted on 23.08.2002 and the lease will be expired on 22.08.2022. The mining plan was prepared and approved by IBM vide Letter No. AP/KNL/MP/LST-78/HYD, dated 05.06.2002**.**The mining operations were commenced from 23-08-2002.

The Kolimigundla Limestone Mine of M/s. Sri Sainath Minerals has transferred the partial portion of the lease area due to financial & technical problems to M/s S.J.K. Steel Plant over an extent of 7.875Ha in Sy.No.191/A1, 191/A2, 188/3 and 195/4A3A(P) of Kolimigundla Village & Mandal, Kurnool District, Andhra Pradesh. The remaining portion of the lease area is retained by the M/s. Sri Sainath Minerals over an extent of 4.048Ha in Sy.No. 195/4A2A, 195/4A2B, 195/4A3A (P). The proceeding vide Letter No. 1360/M4/2006, dated 15-11-2006.

A modification in the mining plan including progressive mine closure plan was prepared under Rule 22(6) of MCR, 1960 and 23 (B) of MCDR, 1988 for reduce the lease area from 11.923Ha to 4.048 Ha for the period of 2012-13 to 2016-17 and approved vide Letter No. AP/KNL/MP/Lst-78/HYD, dated 25.01.2013.

Now, the lessee is submitting the Review of Mining Plan under Rule 17(2) of MCR, 2016 for approval for the period 2017-18 to 2021-22. The mining scheme was approved by IBM vide Letter No. AP/KNL/MP/LST-78/HYD, dated 15.12.2016 .

1.1 Profile of the Project Proponent

P. Bayapureddy, is the Proprietor of Sri Sainath minerals. The Proprietor of this company is having experience to undertake the mining operations. However the Mine will be undertaken under the supervision of well experienced Mining Consultant.

1.2 Objectives Of The Project

The present proposal aims at excavating Limestone at the rate of 1,50,000 TPA in an area of 4.048 Ha.

1.3 Brief Description Of The Proposed Mining Activity

1.3.1 Nature

The proposed method of mining is by Opencast Semi Mechanized Mining Method other than fully mechanized.

1.3.2 Size Of The Project

Mining activities will be carried out in an area of 4.048 Ha. and rate production will be 1,50,000 TPA.

2.0 DETAILS ABOUT THE PROPOSED ML AREA

The following are the salient features of ML area.

Extent of the ML area	4.048 Ha.
Nearest rail head	Tadipatri railway station (24.2 Kms.)
Nearest Airport	Satya Sai Airport (108.6 Kms.)
Defence Installations	Nil within 10 Km radius
Historic & places of tourist importance	Belum caves – 3.0 Kms
Reserved forests	Nil within 10 Km radius
National & State Highway	SH-27 – 7.0 Kms SH-57 – 1.6 Kms
Interstate Boundary	Nil
National Park/ Wild life sanctuary/Biosphere reserve	Nil
Nearest village	Kolimigundla Village– 1.1 Kms.
List of Industries	Nil
Seismicity	The study area falls under seismic zone II
Water bodies	Timmanayani Cheruvu-6.5 Kms. Mada Vagu – 1.6 Kms. Erra vagu – 8.9 Kms.
Major crops in nearby areas	Cotton, Bengalgram, Groundnut, Sunflowee, Caster etc.,
Rehabilitation & Re-settlement	Nil
Products	Limestone
Present use of land	The lease area is a plain ground with a very gentle slope towards south and east.
Effect on ground water	The ground water has encountered at a depth of 60 m from the general ground level in the lease hold area.
Source of water	Bore well
Forest land in the ML area	Nil

Regional Geology

The Kolimigundla area (the subject area) is part of the Kurnool Sub-basin of the Cuddapah Basin. The rocks of the Cuddapah Basin including the Kurnool Sub-basin belong to the Meso to Neoproterozoic Era. Gneisses and granitoids with enlaves of greenstone belts from the basement to the rocks of the Cuddapah Basin. The contract between the basement and the Cuddapah rocks is marked by a profound unconformity well known in the geological literature as "Eparchaean unconformity".

The rocks of the Kurnool Sub-basin overlie the Cuddapah rocks with an unconformity. Narji Limestone and Koilkuntla Limestone along with other formations are part of the stratigraphic sequence of the Kurnool rocks. The former is the host of all grades of limestone used in the cement and metallurgical industries. There is another sub-basin in the north-eastern part of the Cuddapah basin and is known as Palnad sub-basin. There is profound lithological similarity between the two sub-basins, and the dominant rock type in both the basins is limestone.

The regional stratigraphy in respect of the rocks of the Kurnool Group is given below.

Kurnool Group	**Kurnool Sub-Basin Thickness**	**Palnad Sub-Basin Thickness**
Nandyal Shale	50–100m	30–50m
Koilkuntla Limestone	15–50m	10–30m
Paniam Quartzite	5–15m	5–10m
Auk Shale	5–15m	3–5m
Narji Limestone	100–200m	300–350m
Banganapalle Quartzite	5–20m	5–25m

Rocks of the Kurnool Group have sub-horizontal bedding and have almost blanket geometry. Out of the different formations of this group only the Narji Limestone, which is named after the place Nididizuvvi (Narji), is economic importance in respect of cement industry. It is the treasure house of cement grade limestone. At a few places, SMS grade is also present. Number of cement plants in the State of Andhra Pradesh thrive on the vast limestone deposits available within the Narji Limestone. The Narji Limestone is basically divided in to three Units viz.,

Upper flaggy limestone: Flaggy nature due to some argillaceous matter.

Middle massive limestone: Compact and breaks with cochoidal fracture.

Lower flaggy limestone: Flaggy nature due to some argillaceous matter.

It is mostly the massive unit that forms the backbone of the cement industry in the area. The flaggy limestone generally finds its use as building-stone.

Geology of the lease area:

The subject area exposes the middle massive limestone unit. The limestone here is gray-dark gray, hard, compact and fine grained (micrite). It is traversed by very thin (<0.1 cm) quartz veins. Limestone has stylolites, which indicate homogeneity of the rock.

And towards south-east of the area Limestone belongs slightly flaggy because of increase in argillaceous component. The trend of the bedding in general is NNE-SSW and E-W. the bedding grades from 10^0-15^0 towards South East. The subjected area is also partly covered by patches of black cotton soil. The thickness of the black cotton soil is less than 1m and is noticed mainly in the south-western part of the area.

Thickness of the Limestone:

The thickness of the limestone has been found based on the geological cross-sections. The field information has been collected and geological cross-sections are drawn along the core boreholes. From the cross-sections, the overall thickness has been calculated considering the width and the dip of the formation and it is found to be 25m on an average.

Origin:

It is a sedimentary rock formed as a chemical precipitate in a starved Kurnool sub-basin. The dark colour of limestone indicates the euxinic condition of formation. The grain size is very fine. On petrographic consideration, it can be classified as micrite. The rock gives metallic sound when hit with a hammer.

3.0 MINING ACTIVITY

Introduction

Mine lease area being operating over an extent of 4.048 Hectares is located at Sy. Nos. 195/4A2A, 195/4A2B and 195/4A3A of Kolimigundla Village & Mandal, Kurnool District, Andhra Pradesh.

Details of Prospecting/Exploration already carried out:

In the modification of the mining period, the lessee has explored the area with 1 No of working pit for exploration of Limestone, upto a depth of 11.3m from the surface.

The details of working pits depth and locations

EXISTING WORKING PITS LOCATIONS						
SL.NO.	**WORKING PIT ID**	**NORTHING**	**EASTING**	**L X W X D (Max RL-Min RL)**	**LITHOLOGY**	**Remarks**
1	WP-1	1668825 to 1668960	190677 to 190872	136 X 196 X 11.3 (261.4-250.1)	0-0.5m Soil 0.5-11.3m Limestone	Refer **Annexure-X & XA**

In the mining plan period, the lessee has explored the area with 4 No's of core boreholes for exploration of Limestone, upto a depth of 12-25m from the surface.

The details of drilled core boreholes depth & location

YEAR	BOREHOLE ID	DEPTH IN M	CO-ORDINATES	
			EASTING	NORTHING
2013-14	CBH-1	25	190833	1668954
	CBH-2	25	190683	1668952
	CBH-3	18	190675	1668829
	CBH-4	12	190847	1668822

And during the period 2016-17, the lessee has explored the area with 4 No's of DTH boreholes in order to access the depth of the ore. These boreholes were drilled to a depth of 23-30m from the surface.

The details of drilled DTH boreholes depth & location

YEAR	BOREHOLE ID	DEPTH IN M	CO-ORDINATES	
			EASTING	NORTHING
2016-17	DTH-1	30	190611	1668974
	DTH-2	29	190678	1668778
	DTH-3	26	190745	1668778
	DTH-4	23	190829	1668809

Future programme of exploration programme planned in next five years as in table below:

During this proposed review of mining plan period 2 No's of boreholes are proposed in the pit to know the extent of the ore.

The year-wise boreholes proposals

YEAR	BOREHOLE ID	DEPTH IN M	CO-ORDINATES	
			EASTING	NORTHING
2017-18	PDTH-1	20	E 190786.0390	N 1668888.8529
	PDTH-2	20	E 190721.0745	N 1668865.3832

The summary of year-wise proposals

Year	No. Of Boreholes (Core/RC/DTH)	Grid interval	Total meterage	No. of Pits dimensions and volume	No. of Trenches, dimensions and volume
2017-18	2 (PDTH)	--	40	---	---
2018-19	---	--	--	---	---
2019-20	---	--	--	---	---
2020-21	---	---	---	---	---
2021-22	---	---	---	---	---

Reserves and Resources

The reserves are furnished according to the MEMC Rules, the cutoff grade and threshold values considered for reserves estimation. For the ascertaining of UNFC code following procedure is adopted.

i) The category of the deposit as per MEMC Rules comes under Category-I of Stratiform & Tabular Deposit of Regular Habit.

ii) The status of exploration is taken as G1 scale of exploration, because lessee has explored the area with 1 no of working pit,4 No's of core boreholes& 4 No's of DTH boreholes in a closed interval grid pattern. The Limestone is proved in three-dimensional view in working pit and the area enclosed in 1 no of working pit, 4 No's of core boreholes& 4 No's of DTH boreholes in less than 200m X 200m interval are considered for G1 scale of exploration. The depth of the limestone is proved upto a maximum 30 mfrom the surface by the exploration of DTH bore hole No. -1 as shown in the section D-D'. But depth of the UPL is considered upto 236MRL only based on the existing parameter as per the sections. The ore body exposed in the pit varies from 11.3m depth from the surface in the pitand upto 12-30m depth in the boreholes. Hence, it is geologically explored which is considered as Geological Axis '1'.

iii) For Blasting and loading, about 29 employees are required. The approximate estimated cost towards production is **Rs.210/-** per ton. However, there is good demand in market for all grade and size and the usual selling price will be ranging between 350-400 rupees per ton as per the market

fluctuation, so Limestone is economically viable. But as the lessee has not obtained any clearance for environment, consent for establishment & consent for operation, it is considered as pre-feasible which is taken as Feasible Axis '2'.

iv) Based on the exploration with existing working pit, trail pits and its analysis, review of mining plan period is prepared as per the provisions & will be submitted to the IBM. The reserves have been ascertained above economic cut-off grade i.e. CaO-35% (Min), MgO-4% (Max), SiO_2–18% (Max) & Alkalies-0.5%(Max) and by considering all above factors the mining is economical. Hence it is considered as Economical Axis '1' & Reserves are blocked in UPL & 7.5m safety zone barrier code is considered for economical axis is 2.

v) The combining of EFG axis the UNFC code for reserves is assigned as 121.

The data of mineral exposed in three dimensional views of the working pit, core & DTH boreholes in the mining area is taken into consideration for reserve estimation.

The estimation of ore reserves is made by using cross-section method using cross-sectional area method. The geological cross sections are prepared at an interval of 50m, across the strike of the ore body. The area of individual litho-units in each cross section is measured and multiplying sectional interval and tonnage is arrived by multiplying with its bulk density.

The bulk density is considered as 2.25t/Cu.M for Limestone & 2.0t/Cu.M for waste with recovery taken as 98% and 2% for intercalated waste, the resources and reserves are estimated as per UNFC guidelines.

Proved Mineral Reserves (G1 scale of exploration) are the reserves established based on the 1 No of working pit, 4 No's of core boreholes& 4 No's of DTH boreholes at an interval of 200m x 200m, the limestone deposits are exposed in the three dimensions which is explored during the previous excavation of the area is considered as Proved Mineral Reserves UNFC code is taken as 121.
Blocked mineral reserves in UPL & 7.5m safety zone barrier UNFC code is considered as 221.

The detailed summary of Geological Reserve/Resource as on 26.07.2016.

Level of Exploration	**Resource in million tonnes**	**Grade**
	Limestone	**CaO**
G1–Detailed Exploration	1.79	46.68%
TOTAL	**1.79**	

The threshold limit of IBM for Limestone is CaO-35% (Min), MgO-4% (Max), SiO_2–18% (Max) &

Alkalies-0.5 %(Max).

The detailed section-wise areas, volume calculations of geological reserves/resource are tabulated in a tabular form are enclosed in the following table

The detailed calculations of Geological Reserves & Resources

DETAILED CALCULATIONS FOR GEOLOGICAL RESERVE/RESOURCE FOR KOLIMIGUNDLA LIMESTONE MINE									
LIMESTONE						TOP SOIL			
Sections	**Area in m²**	**Sectional Influence in m**	**Volume in m³**	**Qty @ B.D. 2.25 with Rec 98% in tonnes**	**Intercalated waste @ B.D. 2.0 with Rec 2% in tonnes**	**Area in m²**	**Volume in m³**	**Qty @ Rec 100% & B.D. 2.0 in tonnes**	**Total Waste in Tonnes**
AA'	1,362	50	68,085	150,127	2,723	7	339	678	3,401
BB'	3,021	50	151,062	333,091	6,042	8	391	782	6,825
CC'	4,484	50	224,212	494,387	8,968	32	1,614	3,228	12,197
DD'	5,397	50	269,859	595,040	10,794	72	3,584	7,168	17,963
EE'	2,042	50	102,109	225,151	4,084	37	1,834	3,669	7,753
Total in Tonnes				**1,797,796**	**32,613**			**15,525**	**48,138**
Total in Million Tonnes				**1.79**	**0.03**			**0.02**	**0.05**

Based on the exploration, available measured field data, exposure in the lease area and adjoining area entire geological sections are updated and ore reserves have been freshly-estimated as on **10.10.2016.**

The Summary of Mineable Reserve

CATEGORY	RESOURCE IN MILLION TONNES	GRADE
	LIMESTONE	**CaO**
Proved Mineral Reserves (121)	1.03	46.68%
TOTAL	**1.03**	

The detailed calculations of Mineable Reserves

DETAILED CALCULATIONS FOR MINEABLE RESERVE FOR KOLIMIGUNDLA LIMESTONE MINE									
LIMESTONE						TOP SOIL			
Sections	**Area in m²**	**Sectional Influence in m**	**Volume in m³**	**Qty @ B.D. 2.25 with Rec 98% in tonnes**	**Intercalated waste @ B.D. 2.0 with Rec 2% in tonnes**	**Area in m²**	**Volume in m³**	**Qty @ Rec 100% & B.D. 2.0 in tonnes**	**Total Waste in Tonnes**
AA'	402	50	20,105	44,331	804	2	86	172	976
BB'	2,018	50	100,879	222,439	4,035	-	-	-	4,035
CC'	3,375	50	168,754	372,102	6,750	22	1,090	2,180	8,930
DD'	2,849	50	142,467	314,139	5,699	45	2,231	4,462	10,161
EE'	740	50	36,985	81,551	1,479	28	1,378	2,756	4,235
Total in tonnes				**1,034,563**	**18,768**			**9,570**	**28,338**

Total in million tonnes	**1.03**	**0.02**			**0.01**	**0.03**

The Summary of Blocked Reserves & Resources

CATEGORY	RESOURCE IN MILLION TONS	SCALE OF EXPLORATION
	LIMESTONE	
Feasibility Mineral Resources (221)	0.76	G1
TOTAL	**0.76**	

The detailed calculations of Blocked Reserves

DETAILED CALCULATIONS FOR BLOCKED RESERVE OUTSIDE THE ULTIMATE PIT LIMIT& WITHIN THE SAFETY ZONE OF KOLIMIGUNDLA LIMESTONE MINE									
G-1 SCALE OF EXPLORATION (UNFC CATEGORY-221)									
LIMESTONE						TOP SOIL			Total Waste in Tonnes
Sections	Area in m²	Sectional Influence in m	Volume in m³	Qty @ B.D. 2.25 with Rec 98% in tonnes	Intercalated waste @ B.D. 2.0 with Rec 2% in tonnes	Area in m²	Volume in m³	Qty @ Rec 100% & B.D. 2.0 in tonnes	
AA'	503	50	25,174	55,508	1,007	0.1	6	13	1,020
BB'	457	50	22f,873	50,434	915	-	-	-	915
CC'	611	50	30,543	67,348	1,222	0.3	13	25	1,247
DD'	1,087	50	54,335	119,808	2,173	0.6	30	61	2,234
EE'	810	50	40,514	89,332	1,621	0.2	12	23	1,644
Total in tonnes				**382,430**	**6,938**			**122**	**7,059**
Total in million tonnes				**0.38**	**0.01**			**0.0001**	**0.01**

DETAILED CALCULATIONS FOR BLOCKED RESERVE BEYOND THE SAFETY ZONE OF KOLIMIGUNDLA LIMESTONE MINE									
LIMESTONE						TOP SOIL			Total Waste in Tonnes
Sections	Area in m²	Sectional Influence in m	Volume in m³	Qty @ B.D. 2.25 with Rec 98% in tonnes	Intercalated waste @ B.D. 2.0 with Rec 2% in tonnes	Area in m²	Volume in m³	Qty @ Rec 100% & B.D. 2.0 in tonnes	
AA'	456	50	22,806	50,288	912	5	246	493	1,405
BB'	546	50	27,279	60,150	1,091	8	391	782	1,873
CC'	498	50	24,915	54,937	997	10	511	1,023	2,019
DD'	1,461	50	73,058	161,092	2,922	26	1,323	2,646	5,568
EE'	492	50	24,611	54,268	984	9	445	889	1,874
Total in tonnes				**380,735**	**6,907**			**5,833**	**12,739**
Total in million tonnes				**0.38**	**0.01**			**0.01**	**0.01**

Mineral Reserves/Resources: Mineral Resources: (Mineral resources may be estimated purely based on level exploration, with reference to the threshold value of minerals declared by IBM)

Summary of Mineral Reserves/Resources

Level of Exploration	Resource in million tons	Grade
	Limestone	
Proved Mineral Reserves (121)	1.03	46.68%
Feasibility Mineral Resources (221)	0.76	
TOTAL	**1.79**	

The total category- wise updated reserves and resource as on 10.10.2016

Classification	UNFC Code	Quantity in Million Tonnes	Grade		
(1)	(2)	(3)	(4)		
Total Mineral Resources (A + B)		**Limestone**	**CaO%**	**MgO%**	**SiO_2**
A. Mineral Reserve					
(1) Proved Mineral Reserve	111	--	--	--	--
(2) Probable Mineral Reserve	121	1.03	46.68%	2.26%	11.7 %
B. Remaining Resources					
(1) Feasibility Mineral Resource	221	0.76	46.68%	2.26%	11.7 %
(2) Prefeasibility Mineral Resource	222	--	--	--	--
(3) Measured Mineral Resource	331	--	--	--	--
(4) Indicated Mineral Resource	332	--	--	--	--
(5) Inferred Mineral Resource	333	--	--	--	--
(6) Reconnaissance Mineral Resource	334	--	--	--	--
Total		**1.79**			

MINING

OPEN CAST MINING:

The mine was worked with open cast Other than fully mechanized category 'A'. The mining operations and workings are adopted by keeping 3m bench height and the width is 6m. One working pit is opened in the past period in the lease area Mining workings are carried out by IR drilling and blasting. Drilling IR is done by using compressor.

Now, in the proposed review of mining plan in order to operate the mine opencast other than fully mechanised method will be followed. The working operation will be continued from the same pit it will extend in all the directions for extraction of the mineral. The bench height of 3m and the width will be not less than 6m will be maintained. The blasting will be undertaken by controlled blasting with millisecond delay detonators.

The drilling will be done with the IR and the blasting with slurry explosive, with controlled blasting. The blasted/excavated mineral is loaded by excavators into the tippers of 10ton capacity and transported directly to the consumer or buyer. The excavator will be used for extraction and loading of the mineral & waste. The bench slope will be maintained 45^0 slope. The waste generating as intercalated waste will be dumped in the temporary dump in the demarcated place as shown in

the Proposed Production & Development Plan and later utilized for road development purpose for transport within the mine. The top-soil generated will be temporarily stored in a predetermined area within the lease, later it will be utilized for afforestation purposes. The benches are formed directly in the ore body only. The Limestone Pit will be continued from Pit-1 in the lease area.

The general ground water table is found at a depth of about 90m from the surface in the surrounding areas. The mining operations may reach upto maximum depth of 27m from the surface & bottom Level upto 236m RL, which is above the ground water table. Hence, no ground water table is likely to be encountered throughout the life of the mine. The water table is below 90m from surface.

MINE MACHINERIES

The list of required mining machineries for proposed production & drilling blasting planning, currently being used is given in the below table.

Sl.No.	Equipment / Machinery	No of Units	Capacity
1	Tippers /Trucks	3	10T
2	IR drilling machine	2	83 mm dia, 100 cfm
3	Water Tankers	1	10,000 lit
4	Excavator	3	1.6 Cu.M
5	Front End Loader	2	2.6 Cu.M

The transport of ore from mine head to various customers is through hired tippers or trucks by road from plant.

Drilling:

During review of mining plan period, the maximum handling estimated is about 1,50,000 Tonnes of ore, 2,721 Tonnes of waste in the year 2020-21. Out of this, about 80% of handling shall require for drilling and blasting. For developing 3m height bench the actual drilling requires 3.3m per hole (10% extra drilling to remove toe as sub grade drilling). The drilling will be done by IR drilling machine with 32mm dia.

Total material handled (max) shall be 1,50,000 + 2,721 = 1,52,721(Ore + Waste) tonnes in every year. The drilling and blasting is only 80%.

For developing 3m height bench the actual drilling requires 3.3m per hole.

The number of drilling units required per year is calculations the below.

Depth of the hole 3.3m

	-	
Burden	-	1.5m
Spacing	-	2.0m
Avg. Bulk density	-	2.125t/Cu.M
Total material blasted per hole		Burden X Spacing X Depth X Bulk Density 1.5m x 2.0m x 3.3m x 80% efficiency x 2.125t/Cu.M **16.83 Tonnes**
Therefore, rock broken/meter		**16.83**Tonnes/3.3m = 5.1Tonnes/m
Drilling meterage required/yr		152,721 Tonnes = 29,945m 5.1 Tonnes/m
Drilling required per day		29,945m/300days = 99.82m/day

Driller can drill 60m/day

No. of drills required total Meterage required to be drill per day/ machine can drill per day.

99.82/60m = 1.66 No's.

Hence, two number of IR drilling machines is adequate for drilling or it can hire whenever drilling operation required.

Blasting Parameters:

Blasting: The blasting will be carried out by series blasting with parallel rows of minimum 2No's, the slurry explosive will be used for blasting, the millisecond delay detonators will be used for blasting to avoid vibration and flying fragments. The maximum number of holes blasted per day will be 15No's. The firing will be done by electrical blasting with millisecond delay detonators with controlled blasting techniques. The change per hole will be maximum 3.6kg.

Quantity broken/ hole = 1.5m x 2.0m x 3.3m x 80% efficiency x 2.125t/Cu.M

= **16.83 Tonnes**.

Powder factor = 4.68 tonnes/kg.

Blasting Pattern:

The blast design may have the average burden and spacing of 1m and 1.5m respectively. The charge per hole shall be about 3.6kg including 3.32kg ammonium nitrate and 1kg slurry.

At a time 15 holes shall be blasted and the maximum charge per delay shall be about 25kg. However, the blast design would be optimized for minimum vibration, noise and throw.

Type of explosives to be used:

The slurry explosives with safety fuse would be used for blasting. The prills of ammonium nitrate with diesel as fuel would be used to load the blast hole as column charge along with booster and explosives. For blasting shock tube initiation device, would also be used.

Precautions to be observed during drilling and blasting:

Drilling precautions:

- Wet Drilling is adopted.
- 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 precautions:

- Proper charge per delay shall be regulated
- Millisecond delay detonators or sequential blasting exclusively used.
- Stemming column shall be more than the burden to avoid blown out shots.
- Each blast would be being carefully planned, supervised executed and observed by expert staff.
- To reduce the fly rocks vibrations, Noise control the delay detonators will be used.

Powder factor in ore and over burden/waste/development heading/stope

Powder Factor:

The volume of rock broken per kg of explosive is, (3.3m is depth of the hole, 1.5m is the Burden, 2.0m is Spacing, 80% is the efficiency, 2.125t/cum is Avg. Bulk Density) = 3.3m x 1.5m x 2.0m x 80% x 2.125t/Cu.M= 16.83 Tonnes.

Therefore, charge/hole	=	16.83tonnes/4.68tonnes/kg= 3.6Kg.
Total drilling meterage is 29,945m		
The number of hole required is	=	29,945m/3.3m = 9,074 No's
Total explosive required is	=	9,074 x 3.6 = 32,666kg
The yield per hole is	=	1.5 x 2.0 x 3.3 X 2.125 X 0.80 = 16.83Tonnes
Power factor	=	16.83 Tonnes/3.60kg = 4.68.

The secondary blasting will not be there. If any boulder comes with excavator it will be broken or with by hammer manually it will be broken.

Storage of explosives:

The blasting will be given to outsourcing to the authorized agency who having the valid explosive license from the Explosive commissioner. The storage of explosive is not proposing in the lease area as the authorized agency directly will bring the explosive and blasted the drilled holes and takes back the un-used explosive from the mine.

The tippers requirement calculated as under:

The maximum handling estimated is about 1,50,000 tonnes of Limestone Ore, 2,721 Tonnes of waste and 3,742 Tonnes of top soil in the year 2020-21.

=1,56,463 Tonnes/300 days/7 hours per day /6 trips per tipper/10 Tonnes =1.24 No's = ~2 No's.

Assuming 80% availability and spare considering the tipper, requirement is 3 No's.

The requirement of excavators is calculated as under:

The bucket capacity of the excavator available is 1.6m^3. The average bulk density of ore and waste is considered as 2.125 tonnes/Cu.M.

The loading capacity of the Excavator (tonnes / hour) = Excavator bucket capacity (m^3) X passes in minutes X 60 minutes X 90% efficiency X Avg. Bulk Density

=1.6 m^3 X 2 pass/ minutes X 60 X 90% X 2.125

= 367.20Tonnes/hour

Say 367 Tonnes/hour is the loading capacity of the excavator. Therefore, maximum to be handle 2020-21.

Total 156,463(150,000 + 2,721 + 3,742) = 156,463 (Ore +Waste + Top Soil)tonnes to handle max in one year.

The requirement of excavators is calculated as under.

i.e. 156,463 tonnes / 300 days = 521.54 tonnes/day

Therefore, for 7 hours effective working hours, the handling shall be

521.54 tonnes/day / 7 hours = 74.51tonnes/hour

As one excavator handle 367 tonnes/hour minimum one excavator is required to cater the need.

The requirement of front head loader is calculated as under:

The front head loader is required to handle the minerals and reject in the crushing and screening plant for loading and stack maintenance.

The loading capacity of the front head loader (tonnes / hour) =

Front end loader bucket capacity (m^3) X filling factor (%) X loose density (Tonnes/m3) X passes in minutes X 60 minutes X 80% efficiency X Avg. Bulk Density =

2.6 m^3 X 2 pass/ minutes X 60 minutes X 80% X 2.125= 530.4 tonnes/hour

However, 530 tonnes / hour is the loading capacity of the front-end loader.

Therefore, to handle maximum 150,000 + 2,721 + 3,742= 156,463 (Ore + waste + Top Soil) = 156,463 max in a year. The requirement of loader is calculated as under.

i.e. 156,463 tonnes / 300 days = 521.54 Tonnes/day

Therefore, for 7 hours effective working hours, the handling shall be

521.54 Tonnes / 7 hours = 74.51Tonnes/hour

As one loader handle, can load 74.51Tonnes/hour, minimum one front end loader is required to cater the need.

Year-wise tentative Excavation in Cubic Meters indicating development, ROM, pit wise as in table below.

(I)Insitu Tentative Excavation

As Per proposed exploration the depth persistence may increase so that the reserves may increase, it gives the longer mining operation is possible.

During the Review of Mining plan period working will be done from sections, A-A' to E-E' and the mining depth will vary from 261mRL to 237mRL in the Limestone. The year wise proposed production and development details are furnished in the following table

Year	Pit No.	Total Tentative Excavation (Cu.M)	ROM (Cu.M)		ROM Waste Ratio	Top Soil (Cu.M)
			Ore (Cu.M) *	Intercalated Waste (Cu.M)		
1	**2**	**3**	**7**	**6**	**10**	
2017-18	1	68,028	66,667	1,361	1:0.02	**4**
2018-19	1	68,277	66,667	1,361	1:0.02	--
2019-20	1	68,315	66,667	1,361	1:0.02	249
2020-21	1	69,899	66,667	1,361	1:0.05	287
2021-22	1	68,197	66,667	1,361	1:0.02	1,871

* Tentative tonnage of the ore may be arrived by computing approximate bulk density of 2.25 for ore and 2.00 for waste and recovery factor of 98% as these data are variable and may be established on time series.

Detailed calculations of year-wise production and development reserves

DETAILED CALCULATIONS OF PRODUCTION & DEVELOPMENT FOR KOLIMIGUNDLA LIMESTONE MINE										
	LIMESTONE						TOP SOIL			
Year	Section	Area in	Influence in m	Volume in	Quantity in tonnes	Intercalated waste	Area in	Volume in	Qty in tonnes	Total Waste

		m²		m³	Rec 98% & B.D. 2.25	Qty in tonnes 2% Rec	m²	m³	@ Rec 100% & B.D. 2.0	in tonnes
2017-18	AA'	156	50	7,792	17,181	312	-	-	-	312
	BB'	1,205	50	60,236	132,819	2,409	-	-	-	2,409
2018-19	BB'	336	50	16,817	37,082	673	-	-	-	673
	CC'	1,024	50	51,210	112,918	2,048	5	249	497	2,546
2019-20	CC'	1,361	50	68,027	150,000	2,721	6	287	574	3,295
2020-21	CC'	339	50	16,936	37,343	677	7	361	722	1,400
	DD'	1,022	50	51,092	112,657	2,044	30	1,510	3,020	5,064
2021-22	EE'	1,361	50	68,027	150,000	2,721	3	169	338	3,059
Total in tonnes					**750,000**	**13,605**			**5,152**	**18,758**
Total in Million tonnes					**0.75**	**0.01**			**0.01**	**0.02**

Employment generation (Direct & Indirect): The following personnel will be employed for mining in this area.

SL. NO.	CATEGORY OF PERSONS	NUMBER
1	Mines Manager cum Engineer	1
2	Geologist	1
3	Skilled labours	2
4	Semi-Skilled Labours	2
5	Unskilled	23
Total		**29**

4.0 ENVIRONMENTAL MANAGEMENT PLAN

4.1 AIR ENVIRONMENT

The main sources of air emissions due the proposed limestone mining will be Drilling, Blasting, Vehicular movement, loading & unloading of material.

4.1.1 PROPOSED MITIGATING MEASURES

- Applying water for dust suppression on mine haul roads. For this tractor mounted sprinklers will be deployed.
- Wet drilling will be carried out.
- Dust masks will be provided to the workers who work near the mine.
- Pre wetting of area before blasting & After every blast to suppress the dust.
- Over filling of tippers and consequent spillage on the roads will be avoided.
- Regular grading and compaction of haul roads.

- Proper house keeping at the mining, loading and dispatch areas will be practiced.

4.2. WATER ENVIRONMENT

4.2.1. WATER REQUIREMENT

The proposed Mining activity requires 10.9 KLD of water. The water required will be met from the bore well.The following is the breakup of it.

S. NO.	ITEM	WATER REQUIREMENT IN KLD
1.	For Dust Suppression within the ML roads	2.2
2.	For Dust Suppression along the approach Road	2.5
3.	For Domestic Use	0.5
4.	For plantation within the ML area	3.9
5.	For plantation along the approach Road	1.8
	Total	10.9

4.2.2. WASTE WATER

Only source of waste water generation will be sanitary water which will be treated in septic tank followed by subsurface dispersion.

4.4 NOISE ENVIRONMENT

The Noise sources from the proposed mining activities will be drilling, blasting, vehicles movement, etc.

Precautions will be taken during drilling and blasting:

Drilling precautions:

- Wet Drilling is adopted.
- Use of sharp drill bits, delivery of compressed air at optimal pressure and proper maintenance of compressor and drilling machine.
- Provision of earplugs/earmuffs to drillers.

Blasting precautions:

- Proper charge per delay shall be regulated
- Millisecond delay detonators or sequential blasting exclusively used.
- Stemming column shall be more than the burden to avoid blown out shots.
- Each blast would be is carefully planned, supervised executed and observed by expert staff.

- To reduce the fly rocks vibrations, Noise control the delay detonators will be used.

The following noise control measures will be taken control noise from vehicular movement.

- Proper and regular maintenance of vehicles and other equipment will be done regularly.
- Speed of trucks entering or leaving the mine will be limited to moderate speed of 25 Kmph to prevent undue noise from empty trucks.
- All roads will be maintained in good conditions to reduce vehicle noise.

4.3. SOLID WASTE

For this mine, the rejects include intercalated waste and top soil. For the review of mining plan period the quantity of waste to be handled only intercalated waste will be **6,805 Cu.M**. The year-wise generated intercalated waste will be dumped in a temporary dump & later used for road development, the produced waste will be used for road maintenance in the next year and the soil will be utilized for afforestation purposes in monsoon period

The details of year-wise waste generation and location of dumping

Year	Intercalated Waste in m^3	Total Waste in m^3	Location of Dump	
			Easting	Northing
2016-17	1,361	1,361	E 190538.9837 to190547.1388	N 1669365.1085 to 1669358.6165
2017-18	1,361	1,361	E 192565.3439 to192573.5064	N 1669224.0706 to1669230.6741
2018-19	1,361	1,361	E 193726.6223 to193734.7740	N 1668821.4022 to 1668814.8370
2019-20	1,361	1,361	E 193712.7516 to 193718.2591	N 1669227.8647 to1669236.8297
2020-21	1,361	1,361	E 190699.5369 to 190706.6283	N 1668821.2850 to 1668813.6324
Total	**6,805**	**6,805**	E 190694.9728 to 190706.6362	N 1668825.1702 to 1668812.6761

Waste Management: The proposed dumping area lies within the lease area devoid of any mineral resources. The dumping area is located on the south-western portion of the lease area beyond the ultimate pit limit.

The topography of the area selected is having gentle slope with wide contours, thereby minimizing wash off and erosion. The adequate soil moisture conservatory measures and dump management structures will be taken care off while dumping.

- Waste generation per year will be 1361 m^3.
- Waste generation per remaining lease period 1361 X 5 : 6805 m3
- Height of waste dump will be 10 m.
- Area required for dump will be 680.5 x 2 m^2 i.e., 1361 m^2
- A retaining wall will be constructed around the dump for preventing the slanting of waste materials.

4.5 GREEN BELT DEVELOPMENT

The plantation will be taken up in the Buffer zone of the ML area and along the approach road.

In buffer zone 640 sapling will be planted, out of which 150 sapling already planted in the buffer zoen of ML area and sapling was planted on either side of the approach road.

The sapling to be planted will be Neem, Mango, Subabul, Ganuga etc.,

PLANTATION COST DETAILS

Cost of garden soil+ compost for filling hole @0.4 cum	: Rs 80
Cost of sapling	: Rs 60
Total capital cost per sapling	**: Rs 160**
Total plantation area proposed within ML area	: 490
Total capital cost for plantation in ML area	: 490 x Rs. 160
	: Rs 78,400/-

OCCUPATIONAL HEALTH

- Dust masks (29 nos.) will be provided for control of dust.
- Ear plugs (29 nos.) will be provided to employees to reduce the Noise impact.
- Health check-up will be carried out for all employees in an external hospital yearly once and medical records will be maintained.
- Rs. 3000/- per person/year will be allocated employee occupation health.

Periodicity of health checkups done for yearly for workers working in mine.

- Blood test (once in a year)
- Urine test (once in a year)
- Complete Physical examination (once in a year)
- X-ray of chest (once in a year)
- Lung/Pulmonary function test (once in a year)
- Sputum Examination (once in a year)

ENVIRONMENTAL IMPACT ON BELUM CAVES DUE TO THE PROPOSED MINING ACTIVITY OF M/S. SRI SAINATH MINERALS

a) Impact on Belum caves due to the air emissions from the mining activity:

The following air emission control measures will be provided.

- Dust suppression will be carried out on all haulage roads.
- Covered trucks will be used for transport of product.
- Avenue plantation will be taken up along the internal roads.

IMD Annual wind rose diagram of Kurnool has been collected. Annual Wind rose diagram is shown below for your kind perusal. The wind rose diagram enclosed as Annexure- 1 for your kind perusal.

Ambient Air Quality Monitoring stations have been selected to represent ML Area, Predominant Downwind direction, Sensitive /Place of Tourist importance. Baseline Ambient air quality has been monitored at the following locations for $PM_{2.5}$, PM_{10}, SO_2, NOx & CO for 2 days.

Ambient Air Quality Monitoring Station	Direction w.r.t. lease area	Distance w.r.t. Lease area (in Kms.)
Mine Lease Area of M/s. Sri Sainath Minerals	---	---
Belum Caves (representing place of tourist importance)	NW	3.0
Kesinayaniaplle (representing downwind direction)	E	4.5

Monitoring Parameter	Baseline concentration on 01-08-2017 (in µg/m³)		
	ML Area	Belum caves	Kesinayaniaplle
$PM_{2.5}$	25.8	19.5	26.6
PM_{10}	43.9	31.7	44.5
SO_2	11.7	9.3	12.4
NO_x	15.2	11.9	16.9
CO	471	355	510

Monitoring Parameter	Baseline concentration on 02-08-2017 (in µg/m³)		
	ML Area	Belum caves	Kesinayaniaplle
$PM_{2.5}$	24.9	19.7	26.0
PM_{10}	42.2	32.0	43.4
SO_2	11.9	9.6	12.2
NO_x	15.7	12.1	16.1
CO	485	360	500

Air quality modeling has been carried out for fugitive emissions and for vehicular emissions separately. The receptors at ML Area, Belum caves, Kesinayaniaplle have been chosen and the incremental GLCs have been predicted. The isopleths showing the GLCs are enclosed as Annexure-2 for your kind perusal. The following are the Net incremental Ground Level Concentrations due to the Mining activity.

Item	PM_{10}	SO_2	NO_x	CO
Maximum Baseline concentration	44.5	12.4	16.9	510
Incremental concentrations due to mining activity	1.84	--	--	--
Incremental concentrations due to vehicular movement	0.0049	--	0.11	0.07
Net incremental GLC	46.3449	12.4	17.01	510.07
NAAQMS	100	80	80	2000

We have considered the Maximum baseline concentration recorded among all the AAQMS and the incremental concentrations due to mining activity and due to vehicular movement are added to

arrive at the Net incremental Ground Level Concentrations (GLC) during the operation of the mine for the production capacity envisaged in EC application and as preapproved Mining Plan.

These net incremental GLCs of PM, CO are well within the National Ambient Air Quality Standards.

Annual wind rose clearly shows that winds are predominantly blowing from West to East, whereas Belum caves are situated in the NW direction w.r.t. Mining Lease area.

Hence there will not be any adverse impact on Belum caves due to the air emissions due to the mining activity.

(b) Impact on Belum caves due to Noise & Vibration from the Mining activity :

Belum caves are situated at a distance of 3 Kms, in the North-West direction w.r.t. the Mine Lease area.

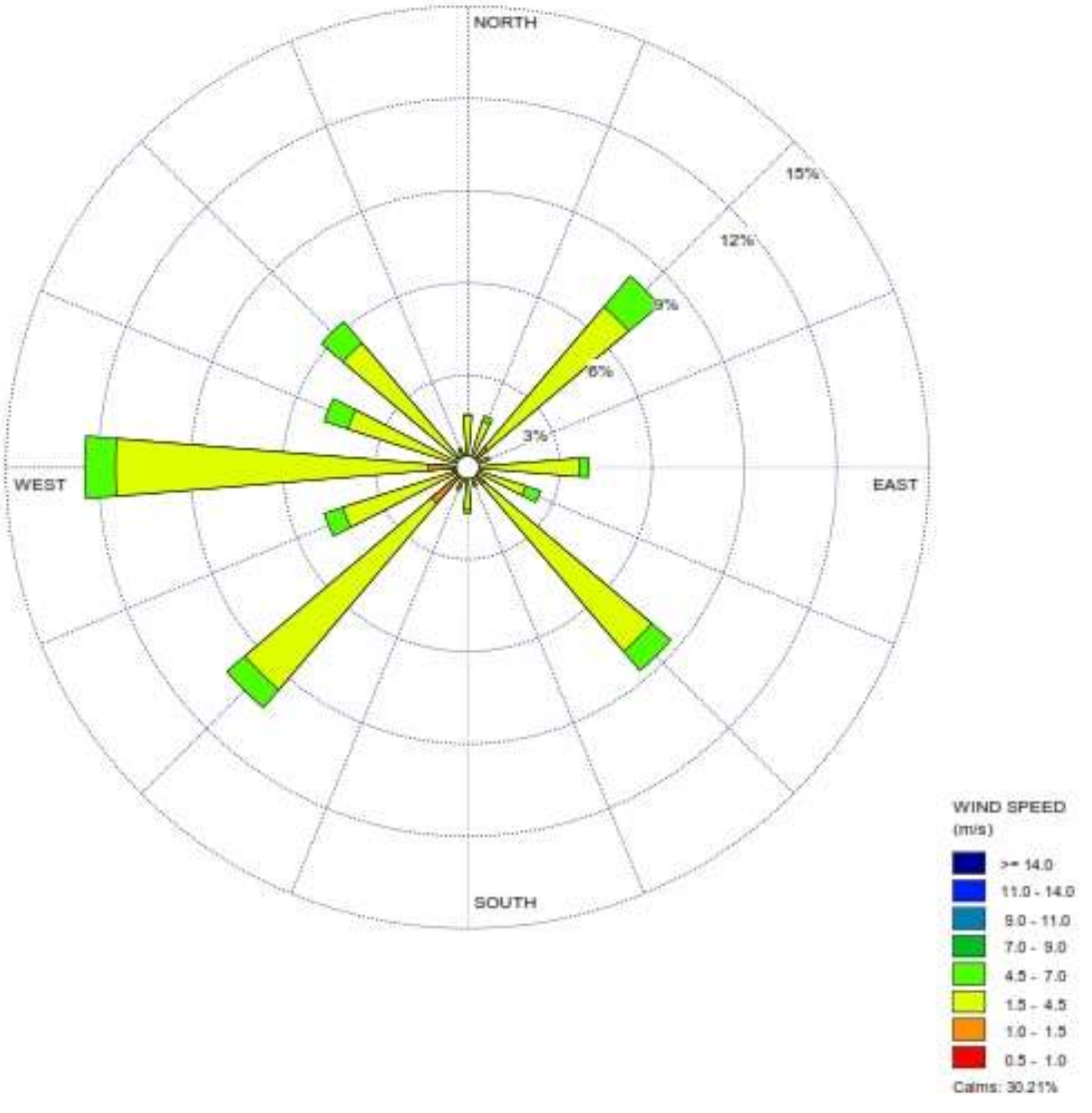
In the Mining operation blasting will not be on continuous basis. However the following latest drilling and blasting techniques will be adopted during operation of the mine.

- Wet Drilling is adopted.
- Use of sharp drill bits, delivery of compressed air at optimal pressure and proper maintenance of compressor and drilling machine.
- Provision of earplugs/earmuffs to drillers.
- Proper charge per delay shall be regulated
- Millisecond delay detonators or sequential blasting exclusively used.
- Stemming column shall be more than the burden to avoid blown out shots.
- Each blast would be is carefully planned, supervised executed and observed by expert staff.
- To reduce the fly rocks vibrations, Noise control the delay detonators will be used.

With the aforementioned we can conclude that there will not be any adverse impact on Belum caves due to the mining activity.

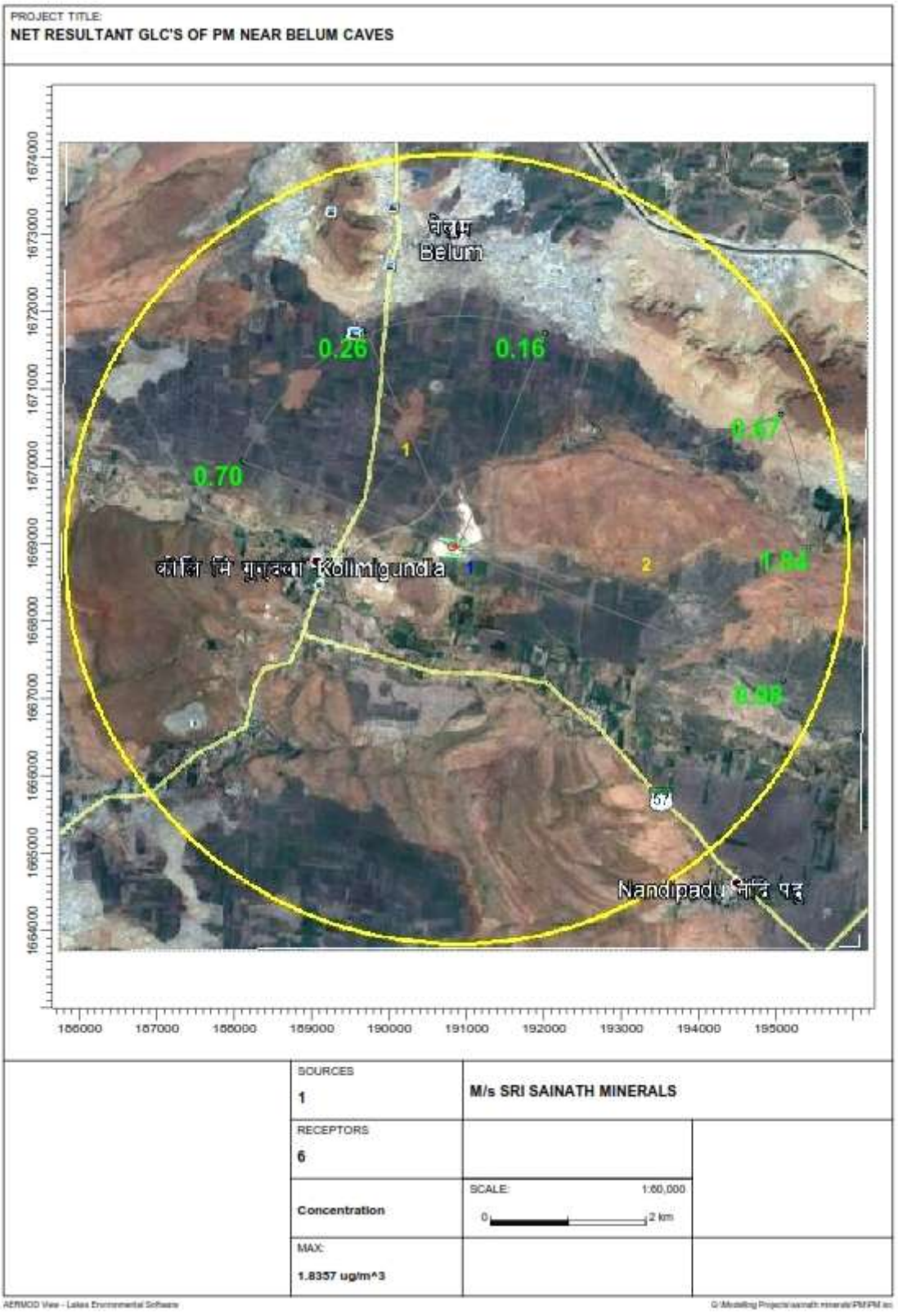
WIND ROSE PLOT:
WIND ROSE AT PLANT SITE
Period : ANNUAL

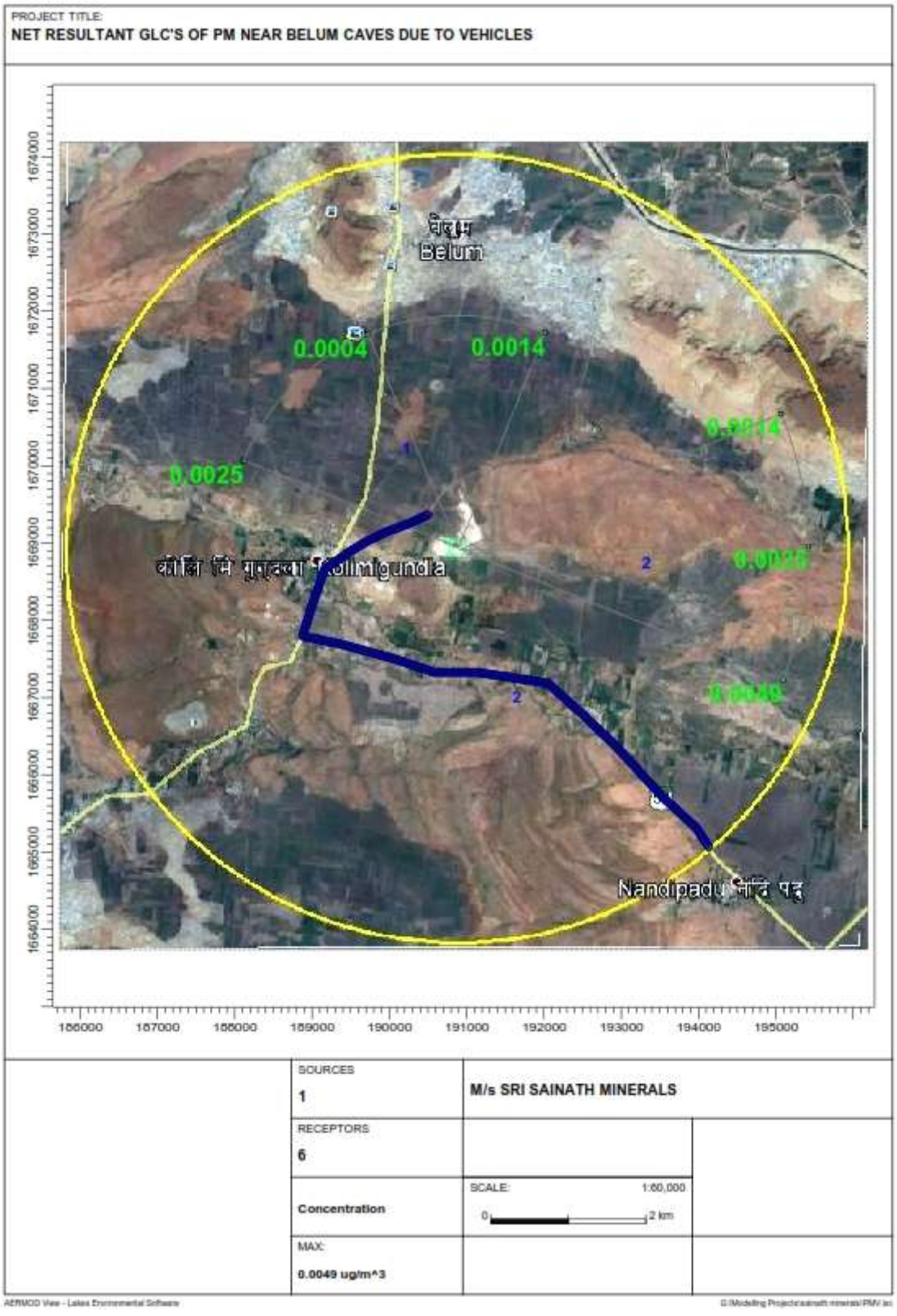
DISPLAY:
Wind Speed
Direction (blowing from)

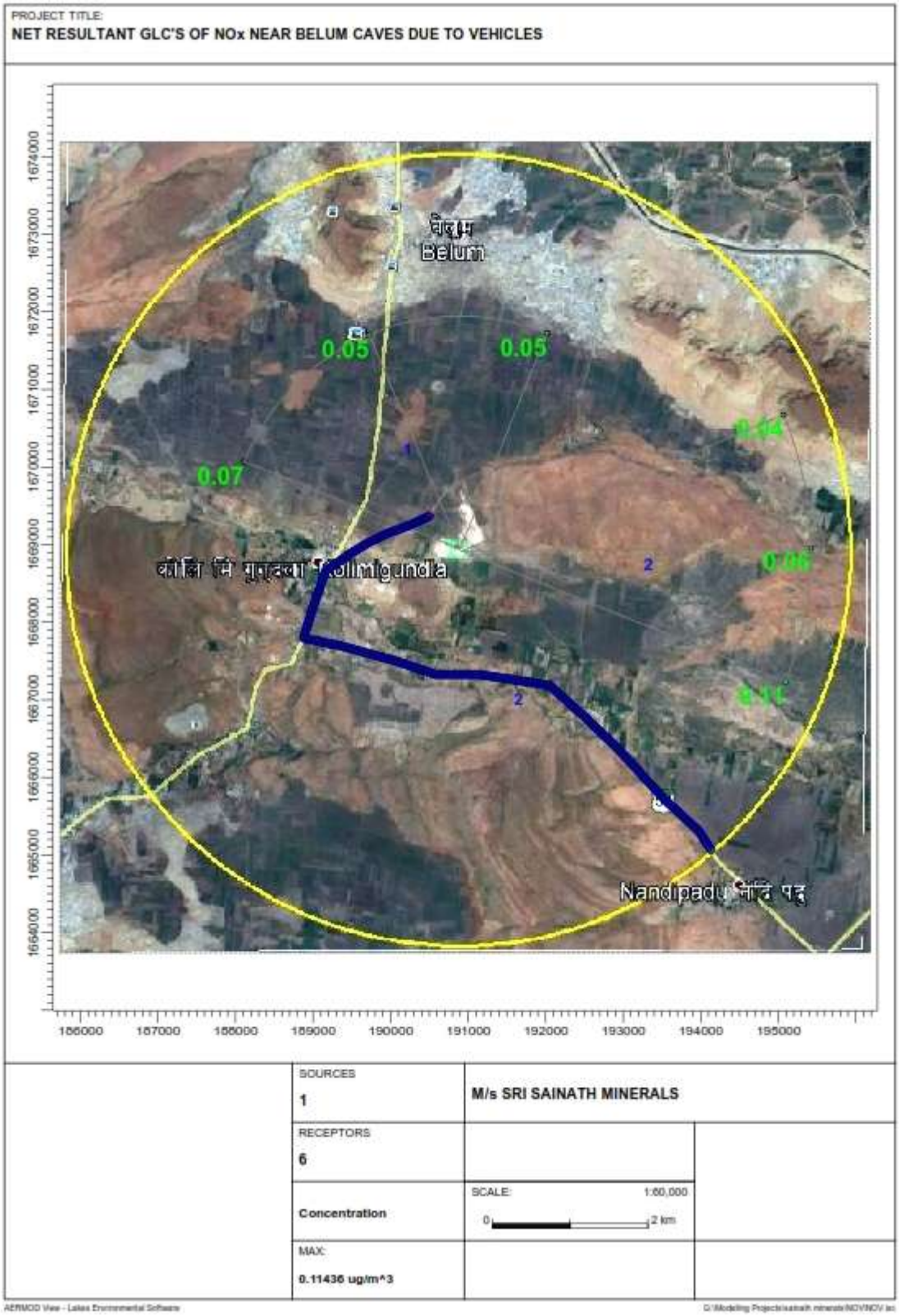


		ANNUAL WIND ROSE (KURNOOL)	
	CALM WINDS: 30.21%		
	AVG. WIND SPEED: 1.89 m/s		PROJECT NO.:

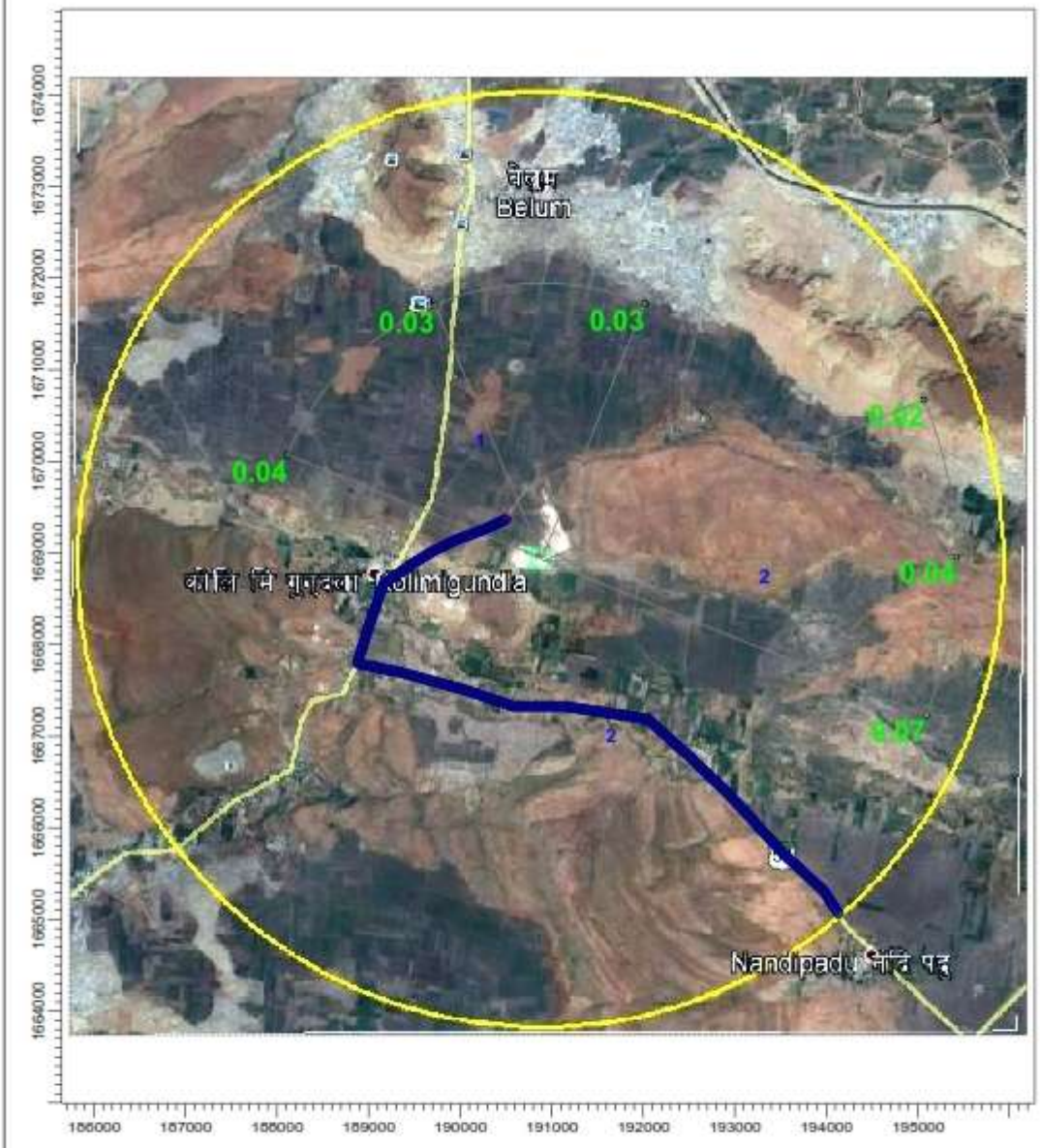
WRPLOT View - Lakes Environmental Software


PROJECT TITLE:
NET RESULTANT GLC'S OF PM NEAR BELUM CAVES
बेलुम
Belum
0.26
0.16
0.47
0.70
1
2
1.84
0.98
57
Nandipadu नंदि पद
156000
157000
158000
159000
190000
191000
192000
193000
194000
195000
1674000
1673000
1672000
1671000
1670000
1669000
1668000
1667000
1666000
1665000
1664000
SOURCES
1
M/s SRI SAINATH MINERALS
RECEPTORS
6
Concentration
SCALE: 1:60,000
0 2 km
MAX:
1.8357 ug/m^3
AERMOD View - Lakes Environmental Software


PROJECT TITLE:
NET RESULTANT GLC'S OF PM NEAR BELUM CAVES DUE TO VEHICLES
बेलम
Belum
0.0004
0.0014
0.0014
0.0025
1
2
0.0025
2
0.0049
Nandipadu नंदिपाडु
1674000
1673000
1672000
1671000
1670000
1669000
1668000
1667000
1666000
1665000
1664000
166000
167000
168000
169000
190000
191000
192000
193000
194000
195000
SOURCES
1
M/s SRI SAINATH MINERALS
RECEPTORS
6
SCALE:
1:60,000
0
2 km
Concentration
MAX:
0.0049 ug/m^3


PROJECT TITLE:
NET RESULTANT GLC'S OF NOx NEAR BELUM CAVES DUE TO VEHICLES
बेलम
Belum
0.05
0.05
0.14
0.07
1
2
0.06
2
0.11
Nandipadu नंदि पाडु
1674000
1673000
1672000
1671000
1670000
1669000
1668000
1667000
1666000
1665000
1664000
156000
157000
158000
159000
190000
191000
192000
193000
194000
195000
SOURCES
1
M/s SRI SAINATH MINERALS
RECEPTORS
6
Concentration
SCALE:
1:60,000
0
2 km
MAX:
0.11436 ug/m^3

PROJECT TITLE:
NET RESULTANT GLC'S OF CO NEAR BELUM CAVES DUE TO VEHICLES



SOURCES: 1	M/s SRI SAINATH MINERALS
RECEPTORS: 6	
Concentration	SCALE: 1:60,000 (0 — 2 km)
MAX: 0.06862 ug/m^3	

AERMOD View - Lakes Environmental Software

5.0 BUDGET FOR ENVIRONMENTAL MANAGEMENT PLA

S. NO.	DESCRIPTION	ITEM	CAPITAL COST IN RS.	RECURRING COST IN RS.
1	Air pollution	Dust masks 29 nos.	Nil	8700
		Dust Suppression	Nil	1,00,000
		Plantation in mine lease area, along Approach road & maintenance	78,400	49,000
2	Water pollution	Construction of garland drains around Dump Area **for remaining Lease period**	35,200	Nil
		Construction of retaining wall for waste dump **for remaining Lease Period**	2,24,000	Nil
3	Noise pollution	Maintenance of machinery suitably	Nil	50,000
		Ear plugs (29 nos.)	Nil	7000
4	Environmental monitoring	Ambient Air Quality monitoring (PM_{10} & $PM_{2.5}$)	Nil	48,000
		Noise level		
5	Occupation Health (for Max. no of Employees)	For conducting Health Tests for employees (Max. 29 nos.)	Nil	87,000
		TOTAL	**3,37,600**	**3,49,700**

REVIEW OF MINING PLAN

(Submitted Under Rule 17(2) MCR, 2016)

Proposed Scheme Period: 2017-18 to 2021-22

IBM Registration No. IBM/10897/2012

Extent : 4.048 Ha

KOLIMIGUNDLA LIMESTONE MINE

at

Sy. No. 195/4A2A, 195/4A2B, 195/4A3A (P)
Kolimigundla Village & Mandal,
Kurnool District, Andhra Pradesh.

of

M/s. SRI SAINATH MINERALS

(Prop. Bayapu Reddy)

H.No.102, Preethi Residency, Near Aravind Ashram, YMR Colony, Proddatur, Y.S.R. Kadapa District, Andhra Pradesh.

Forest	Area in Ha.	Non-Forest	Area in Ha.
(i)Reserve Forest	--	(i)Govt. Waste Land,	4.048
(ii)Protected Forest	--	(ii)Govt. Grazing Land,	--
(iii)Wild Life Sanctuary	--	(iii)Pvt.Agriculture Irrigated Land,	--
(iv)Bird Sanctuary	--	(iv)Pvt. other Land,	--
(v)Others (specify)	--	(v) Others(specify) Patta land	--
Total	--	Total	4.048

Date of Execution of the lease : 23.08.2002

Lease period : 20 years

Date of Expiry of the lease : 22.08.2022

Other than fully Mechanised Category 'A' Open Cast Mine

PREPARED BY

K. PRABHAKARA REDDY
QUALIFIED PERSON

ADDRESS:

SAI UNIVERSAL MINING SERVICES
[Mining, Survey, Geology, Analytical & Environment]
NABL Accredited Laboratory Cert No.T-2736
#Plot No.15-DP2, KIADB, Sankalapura Industrial Area,
Near Water Tank, Ballari Main Road,
Hosapete – 583201, Bellary District, Karnataka.
Tel/Fax No. 08394-265084, +919449815560
Email :sums.hpt@gmail.com
Website : www.sums.org.in

ISO 9001 : 2008
ISO 14001 : 2004

REVIEW OF MINING PLAN

(Submitted Under Rule 17(2) MCR, 2016)

Proposed Scheme Period: 2017-18 to 2021-22

IBM Registration No. IBM/10897/2012 Extent : 4.048 Ha

KOLIMIGUNDLA LIMESTONE MINE

at

Sy. No. 195/4A2A, 195/4A2B, 195/4A3A (P)
Kolimigundla Village & Mandal,
Kurnool District, Andhra Pradesh.

of

M/s. SRI SAINATH MINERALS

(Prop. Bayapu Reddy)

H.No.102, Preethi Residency, Near Aravind Ashram, YMR Colony, Proddatur, Y.S.R. Kadapa District, Andhra Pradesh.

Forest	Area in Ha.	Non-Forest	Area in Ha.
(i)Reserve Forest	--	(i)Govt. Waste Land,	4.048
(ii)Protected Forest	--	(ii)Govt. Grazing Land,	--
(iii)Wild Life Sanctuary	--	(iii)Pvt.Agriculture Irrigated Land,	--
(iv)Bird Sanctuary	--	(iv)Pvt. other Land,	--
(v)Others (specify)	--	(v) Others(specify) Patta land	--
Total	--	Total	4.048

Date of Execution of the lease : 23.08.2002

Lease period : 20 years

Date of Expiry of the lease : 22.08.2022

Other than fully Mechanised Category 'A' Open Cast Mine

PREPARED BY
K. PRABHAKARA REDDY
QUALIFIED PERSON

ADDRESS:

SAI UNIVERSAL MINING SERVICES
[Mining, Survey, Geology, Analytical & Environment]
NABL Accredited Laboratory Cert No.T-2736
#Plot No.15-DP2, KIADB, Sankalapura Industrial Area,
Near Water Tank, Ballari Main Road,
Hosapete – 583201, Bellary District, Karnataka.
Tel/Fax No. 08394-265084, +919449815560
Email :sums.hpt@gmail.com
Website : www.sums.org.in

ISO 9001 : 2008
ISO 14001 : 2004

CONTENTS

The mining plan is approved subject to the conditions/stipulations mentioned in approval letter No. AP/KNL/MP/LST-78/HYD. Dt. 15-12-16

INTRODUCTION:

M/s. Sri Sainath Minerals, possess a mining lease of Kolimigundla Limestone Mine to win Limestone Ore in Sy.No. 195/4A, 2A, 195/4A2B and 195/4A3A(P) of Kolimigundla Village & Mandal, Kurnool District, over an extent of 4.048 Ha. The location of this mine is shown in the Key Plan & is enclosed as **Plate No.1** and the lease sketch is enclosed as **Plate No.2.**

The mining lease was originally granted on 23.08.2002 and the lease will be expired on 22.08.2022 as per the lease deed; the copy of the lease deed is enclosed as **Annexure-I.**. The mining plan was prepared and approved by IBM vide Letter No. AP/KNL/MP/LST-78/HYD, dated 05.06.2002. The mining operations were commenced from 23-08-2002.

The Kolimigundla Limestone Mine of M/s. Sri Sainath Minerals has transferred the partial portion of the lease area due to financial & technical problems to M/s S.J.K. Steel Plant over an extent of 7.875Ha in Sy.No.191/A1, 191/A2, 188/3 and 195/4A3A(P) of Kolimigundla Village & Mandal, Kurnool District, Andhra Pradesh. The remaining portion of the lease area is retained by the M/s. Sri Sainath Minerals over an extent of 4.048Ha in Sy.No. 195/4A2A, 195/4A2B, 195/4A3A (P). The proceeding vide Letter No. 1360/M4/2006, dated 15-11-2006; the copy of the same is enclosed as **Annexure-II** and the model form for transfer of mining lease (Form-O) is enclosed as **Annexure-III.**

A modification in the mining plan including progressive mine closure plan was prepared under Rule 22(6) of MCR, 1960 and 23 (B) of MCDR, 1988 for reduce the lease area from 11.923Ha to 4.048 Ha for the period of 2012-13 to 2016-17 and approved vide Letter No. AP/KNL/MP/Lst-78/HYD, dated 25.01.2013; the copy of the same is enclosed as **Annexure-IV**. So, far the production achieved is 485,212 Tonnes.

Now, the lessee is submitting the Review of Mining Plan under Rule 17(2) of MCR, 2016 for approval for the period 2017-18 to 2021-22. The mining operations are proposed for the ensuing plan period is fully mechanized category 'A' for your kind approval.

APPROVED.

संजय खान निदेशक
Regional Controller of Mines
1 भारतीय खान ब्यूरो
Indian Bureau of Mines
हैदराबाद/Hyderabad

GOVT. OF INDIA-INDIAN BUREAU OF MINES
भारत सरकार - भारतीय खान ब्यूरो
सत्यमेव जयते

The Latitude and Longitude of the lease boundary corners pillars GPS readings are taken by the using of GPS is given below.

Table No.1. The Latitude & Longitude of the lease boundary pillar

GPS READINGS OF THE LEASE BOUNDARY PILLARS		
Boundary Pillar	Latitude	Longitude
BP-1	N 15°04'43.80"	E 078°07'19.60"
BP-2	N 15°04'42.08"	E 078°07'21.60"
BP-3	N 15°04'41.63"	E 078°07'26.30"
BP-4	N 15°04'40.90"	E 078°07'29.60"
BP-5	N 15°04'36.70"	E 078°07'29.00"
BP-6	N 15°04'34.90"	E 078°07'26.90"
BP-7	N 15°04'35.20"	E 078°07'24.00"
BP-8	N 15°04'36.10"	E 078°07'23.60"
BP-9	N 15°04'35.30"	E 078°07'22.90"
BP-10	N 15°04'34.90"	E 078°07'20.40"
BP-11	N 15°04'41.10"	E 078°07'21.20"
BP-12	N 15°04'42.60"	E 078°07'19.20"
GPS Used: Garmin map 76CSx **Map Datum:** WGS-84		

The photographs of the boundary pillars and mine are enclosed as **Annexure-V.**

The mining lease boundary pillar (BP-1) has been connected with three ground control points. They are Jilla Parishad Unatha Patashala as GCP-1, Shivalayam as GCP-2 & Bhairava Swamy Temple as GCP-3.

Table No.2. The table showing the Co-ordinates, Bearing and Distance from the lease boundary

Ground Control Points	Latitude	Longitude	Bearing	Distance on KM from Pillar BP-8	Remarks
GCP-1	N 15°04'38.10"	E 078°06'35.10"	63°	1.32	POLICE STATION
GCP-2	N 15°04'22.30"	E 078°06'42.50"	63°	1.21	NARASIMHASWAMY TEMPLE
GCP-3	N 15°04'41.70"	E 078°06'38.10"	90°	1.22	GOVERNMENT HIGH SCHOOL
Datum: WGS 1984					

1.0 GENERAL:

	Name of ~~applicant~~/~~lessee~~/Rule 45 registration no.	:	IBM/10897/2012
	Correspondence Address	:	M/s. Sri Sainath Minerals, Proprietor Sri. P. Bayapu Reddy, H.No.102, Preethi Residency, Near Aravind Ashram, YMR Colony, Proddatur, Y.S.R. Kadapa District, Andhra Pradesh.
a	District	:	Y.S.R. Kadapa
	State	:	Andhra Pradesh
	Pin code	:	516360
	Phone	:	(08564) 250474
	Fax No.	:	--
	Mobile No.	:	+91 9440008718
	Email ID	:	pbrssminerals@gmail.com
b	Status of the ~~applicant~~/lessee:	:	Private Company
	Private Individual	:	No
	Co-operative Association	:	No
	Private Company	:	Yes
	Public Limited Company	:	No
	Public Sector Undertaking	:	No
	Joint Sector Undertaking	:	No
	Other (Please specify)	:	---
c	Mineral(s) which is/~~are~~ included in the prospecting license (For fresh grant)	:	Not Applicable
d	Mineral(s) which is~~/are~~ included in the ~~letter of Intent~~/lease deed	:	Limestone
e	Minerals which is the ~~applicant~~ /lessee intends to mine	:	Limestone
f	Name of Qualified Person under MCR, 2016	:	K. Prabhakara Reddy
	Address	:	#Plot No.15-DP2, KIADB, Sankalapura Industrial Area, Near Water Tank, Ballari Main Road, HOSAPETE-583201, Ballari District, Karnataka.
	Phone	:	(08394) 265084
	Fax No.	:	(08394) 265084
	Email	:	sums.hpt@gmail.com
	Mobile No.	:	+91 9449815560

An attested copy of registration of the company is enclosed as **Annexure-VI.** The ID and Address proof of the lessee is enclosed as **Annexure-VII.**

The qualification and experience certificates of qualified person for preparing the document as per MCR, 2016 is enclosed as **Annexure-VIII.**

2.0 LOCATION & ACCESSIBILITY

	Lease Details (Existing Mine)	:	The lease area falls in the Survey of Toposheet No.57 I/4
	Name of the Mine	:	Kolimigundla Limestone Mine
	Latitude & Longitude of any boundary point	:	Latitude: N 15°04'42.40" Longitude: E 078°07'19.20"
	Date of Grant of Lease	:	23.08.2002
	Period/Expiry Date	:	22.08.2022 (as per the lease deed).
a)	Name of the Lease Holder	:	M/s. Sri Sainath Minerals (Prop. P. Bayapu Reddy)
	Postal Address	:	Kolimigundla Village & Mandal, Kurnool District, Andhra Pradesh
	Telephone No.	:	(08564) 250474
	Fax No.	:	--
	Email Id	:	pbrssminerals@gmail.com
	Mobile No.	:	+91 9440008718

b) Details of applied /lease area with location map

The lease area falls in Survey of India Toposheet No.57 I/4 which is enclosed as **Plate No.1** as Key Plan. The ML Area lies between Latitude N 15°04'33.70" to N 15°04'42.40" and Longitude E 078°07'19.20" to E 078°07'29.40".

Table No.2.1. Lease Area Details.

Forest	Area in Ha.	Non-Forest	Area in Ha.
(i)Reserve Forest	--	(i)Govt. Waste Land,	4.048
(ii)Protected Forest	--	(ii)Govt. Grazing Land,	--
(iii)Wild Life Sanctuary	--	(iii)Pvt.Agriculture Irrigated Land,	--
(iv)Bird Sanctuary	--	(iv)Pvt. other Land,	--
(v)Others (specify)	--	(v) Others(specify) Patta land	--
Total	--	**Total**	**4.048**

Total Lease area/applied area	:	4.048Ha (10.00 Acres)
District & State	:	Kurnool & Andhra Pradesh
Mandal	:	Kolimigundla
Village	:	Kolimigundla
Whether the area falls under Coastal Regulation Zone (CRZ)? if yes, details thereof	:	No
Existence of public road/railway line, if any nearby and approximate distance	:	**Public Road:** All weather road is available connecting Kolimigundla to Banganapalli & Tadipatri. It is at a distance of 1.5km ENE of the lease area. **Railway Line:** The nearest railway station is located at Tadipatri, at a distance 26km from the lease area.
Toposheet No. with latitude & longitude of all corner boundary point/pillar	:	The lease area falls in Survey of India Toposheet No.57 I/4 which is enclosed as **Plate No.1** as Key Plan. The ML Area lies between Latitude N 15°04'33.70" to N 15°04'42.40" and Longitude E 078°07'19.20" to E 078°07'29.40". The lease boundary pillars are enclosed in the **Table No.1.**

c) Attach a general location map showing area and access routes. It is preferred that the area be marked on a Survey of India topographical map or a cadastral map or forest map as the case may be. However, if none of these are available, the area may be shown on an administrative map.

Refer **Para 2.0(b).**

3.0 DETAILS OF APPROVED MODIFICATION OF MINING PLAN

3.1 Date and reference of earlier approved MP/SOM

A modification in the mining plan including progressive mine closure plan was prepared under Rule 22(6) of MCR, 1960 and 23 (B) of MCDR, 1988 for reduce the lease area from 11.923Ha to 4.048 Ha for the period of 2012-13 to 2016-17 and approved vide Letter No. AP/KNL/MP/Lst-78/HYD, dated 25.01.2013; the copy of the same is enclosed as **Annexure-IV.**

3.2 Details of last modifications if any of approved MP/~~SOM~~, indicating date of approval, reason for modification.

The details of the last modification in the approved mining plan is furnished in Para 3.1.

3.3 Give review of earlier approved proposal in respect of exploration, excavation, reclamation etc.

(I) EXPLORATION: As a part of exploration program, during modification in the mining plan it was proposed to dig 3 No's of boreholes (vertical) within the ML area during the period 2012-13. But the lessee in order to prove the extent of mineralization has drilled 4 No's of core boreholes in the year 2013-14.

Table No.3.1. Summary of the Proposed and Achieved exploration

Year	Proposed Boreholes	Achieved Boreholes	Deviation	Remarks
2012-13	03	08 (4 CBH & 4 DTH)	+05	4 No's of core boreholes & 4 No's of DTH holes are drilled in the year 2013-14 & 2016-17 respectively, to prove the extent of mineralization.

(II) YEAR-WISE PRODUCTION AND DEVELOPMENT PROPOSED AND ACHIEVED IN THE PLAN PERIOD IS SHOWN IN THE BELOW TABLE.

Table No.3.2. The Production Proposed and Achieved during the period 2012-13 to 2016-17 (upto March'16)

Production (in Tonnes)					Remarks
Year	Proposed	Achieved	Deviation in %	Grade	
2012-13	44,299	174,598	+294	35-46% CaO	Due to the market constraint production was more.
2013-14	96,000	105,830	+10	35-46% CaO	
2014-15	96,000	79,934	-17	35-46% CaO	The proposed production and achieved production was different because of the market condition.
2015-16	96,000	93,250	-3	35-46% CaO	
2016 (upto July)	96,000	31,600	--	35-46% CaO	The mining operations are still in progress. Achieved production quantity upto July 2016 is furnished.
Total	428,299	485,212	+13		

The cumulative mine production achieved till 31.7.2016 is **485,212 Tonnes.**

Table No.3.3. The Development Proposed and Achieved during the period 2012-13 to 2016-17 (upto July'16)

Development (in tonnes)				Remarks
Year	Proposed	Achieved	Deviation in %	
2012-13	10,213	29,150	+185	Due to the market constraint development was more.
2013-14	7,751	3,350	-57	The proposed development and achieved was differen because of the low production.
2014-15	4,491	4,550	+1	Due to the market constraint development was more.
2015-16	4,491	8,550	+90	
2016 (upto July)	4,491	3,750	--	The mining operations are still in progress. Achieve development quantity upto July 2016 is furnished.
Total	**31,437**	**49,350**	**+57**	

Table No.3.4. The Afforestation Proposed and Achieved during the period 2012-13 to 2016-17 (upto July'16).

Plantation				Remarks
Year	Proposed (No)	Achieved (No)	Deviation in %	
2012-13	50	--	-100	Due to the less rainfall, the survival rate less.
2013-14	50	200	+300	Due to the heavy rainfall, the survival rat is more.
2014-15	50	250	+400	
2015-16	50	150	+200	
2016 (upto July)	50	225	--	The plantation is still under progress. Achieved plantation upto July 2016 furnished.
Total	**250**	**825**	**+230**	

(III) RECLAMATION AND REHABILITATION MEASURES

No proposals were made for reclamation & rehabilitation in the previous mining plan.

3.4 Give status of compliance of violations pointed out by IBM

~~No violations were pointed during the modification of mining plan.~~

3.5 Indicate and give details of any suspension /closure/ prohibitory order issued by any Government agency under any rule or Court of law.

Nil.

3.6 In case the MP/SOM is submitted under rules 9 and 10 of the MCDR'88 or under rule 22(6) of the MCR'1960 for approval of modification, specify reason and justification for modification under these rules.

Not Applicable.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PART-A

PART – A

1.0 GEOLOGY AND EXPLORATION:

a) Briefly describe the topography, drainage pattern, vegetation, climate, and rainfall data of the area applied/mining lease area.

Topography:

The lease area is a plain ground with a very gentle slope towards south and east. The topographic plan of the leasehold area with a contour interval of 1m is shown as **Plate No.3.** The topography of the map shows the area a general slope towards south and east. A minor stream cuts across the terrain and flows towards southeast. The highest & lowest elevation in the lease area is 262m & 260m from the assumed bench mark is shown on the **Plate No.3.**

Drainage Pattern:

There are no surface water sources within the core zone. The drainage pattern of the area is sub-dendritic in nature. During monsoon, the rainwater is drained through the minor stream on the SE slope.

Vegetation & Rainfall:

The area is plain land and no vegetation. The climate is warm and dry throughout the year and rainfall is scarce. The rainfall does not disturb the mining activities. Moderate wind velocity prevailed in North East –South West direction. The months of September and December account for about 52% of the total annual rainfall.

Climate:

Kurnool district generally has dry climate. The average rainfall in this region is about 400-450mm annually. In the semi-arid region where climate is characterized by hot and humid summer, moderate monsoon and mild winter season. Summer is typically from March to June, when temperature ranges from a maximum of 47^{0}C during day time to a minimum of 27^{0}C at night. Winter from December to February. The rainfall does not disturb the mining activities. Moderate wind velocity prevailed in North East –South West direction.

b) Regional Geology with reference to location of lease/applied area.

Regional Geology

The Kolimigundla area (the subject area) is part of the Kurnool Sub-basin of the Cuddapah Basin. The rocks of the Cuddapah Basin including the Kurnool Sub-basin belong to the Meso to Neoproterozoic Era. Gneisses and granitoids with enlaves of greenstone belts from the basement to the rocks of the Cuddapah Basin. The contract between the basement and the Cuddapah rocks is marked by a profound unconformity well known in the geological literature as "Eparchaean unconformity".

The rocks of the Kurnool Sub-basin overlie the Cuddapah rocks with an unconformity. Narji Limestone and Koilkuntla Limestone along with other formations are part of the stratigraphic sequence of the Kurnool rocks. The former is the host of all grades of limestone used in the cement and metallurgical industries. There is another sub-basin in the north-eastern part of the Cuddapah basin and is known as Palnad sub-basin. There is profound lithological similarity between the two sub-basins, and the dominant rock type in both the basins is limestone. The kurnool group is equivalent to semi series of lower. Vindyans

The regional stratigraphy in respect of the rocks of the Kurnool Group is given below.

Kurnool Group	Kurnool Sub-Basin Thickness	Palnad Sub-Basin Thickness
Nandyal Shale	50–100m	30–50m
Koilkuntla Limestone	15–50m	10–30m
Paniam Quartzite	5–15m	5–10m
Auk Shale	5–15m	3–5m
Narji Limestone	100–200m	300–350m
Banganapalle Quartzite	5–20m	5–25m

Rocks of the Kurnool Group have sub-horizontal bedding and have almost blanket geometry. Out of the different formations of this group only the Narji Limestone, which is named after the place Nididizuvvi (Narji), is economic importance in respect of cement industry. It is the treasure house of cement grade limestone. At a few places, SMS grade is also present. Number of cement plants in the State of Andhra Pradesh thrive on the vast limestone deposits available within the Narji Limestone. The Narji Limestone is basically divided in to three Units viz.,

Blasting Pattern:

The blast design may have the average burden and spacing of 1m and 1.5m respectively. The charge per hole shall be about 3.6kg including 3.32kg ammonium nitrate and 1kg slurry.

At a time 15 holes shall be blasted and the maximum charge per delay shall be about 25kg. However, the blast design would be optimized for minimum vibration, noise and throw.

(b) Type of explosives to be used:

The slurry explosives with safety fuse would be used for blasting. The prills of ammonium nitrate with diesel as fuel would be used to load the blast hole as column charge along with booster and explosives. For blasting shock tube initiation device, would also be used.

Precautions to be observed during drilling and blasting:

Drilling precautions:

- Wet Drilling is adopted.
- 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 precautions:

- Proper charge per delay shall be regulated
- Millisecond delay detonators or sequential blasting exclusively used.
- Stemming column shall be more than the burden to avoid blown out shots.
- Each blast would be being carefully planned, supervised executed and observed by expert staff.
- To reduce the fly rocks vibrations, Noise control the delay detonators will be used.

(c) Powder factor in ore and over burden/waste/development heading/stope

Powder Factor:

The volume of rock broken per kg of explosive is, (3.3m is depth of the hole, 1.5m is the Burden, 2.0m is Spacing, 80% is the efficiency, 2.125t/cum is Avg. Bulk Density) = 3.3m x 1.5m x 2.0m x 80% x 2.125t/Cu.M= 16.83 Tonnes.

The number of drilling ... required per year is calculations the ...

Depth of the hole	--	3.3m
Burden	--	1.5m
Spacing	--	2.0m
Avg. Bulk density	--	2.125t/Cu.M
Total material blasted per hole	=	Burden X Spacing X Depth X Bulk Density
	=	1.5m x 2.0m x 3.3m x 80% efficiency x 2.125t/Cu.M
	=	**16.83 Tonnes**
Therefore, rock broken/meter	=	**16.83** Tonnes/3.3m = 5.1Tonnes/m
Drilling meterage required/yr	=	152,721 Tonnes / 5.1 Tonnes/m = 29,945m
Drilling required per day	=	29,945m/300days = 99.82m/day

Driller can drill 60m/day

No. of drills required = total Meterage required to be drill per day/ machine can drill per day.

= 99.82/60m = 1.66 No's.

Hence, two number of IR drilling machines is adequate for drilling or it can hire whenever drilling operation required.

Blasting Parameters:

(a) Broad blasting parameters like charge per hole, blasting pattern, charge per delay, maximum number of holes blasted in a round, manner and sequence of firing, etc.

Blasting: The blasting will be carried out by series blasting with parallel rows of minimum 2 No's, the slurry explosive will be used for blasting, the millisecond delay detonators will be used for blasting to avoid vibration and flying fragments. The maximum number of holes blasted per day will be 15No's. The firing will be done by electrical blasting with millisecond delay detonators with controlled blasting techniques. The change per hole will be maximum 3.6kg.

Quantity broken/ hole	=	1.5m x 2.0m x 3.3m x 80% efficiency x 2.125t/Cu.M
	=	**16.83 Tonnes.**
Powder factor	=	4.68 tonnes/kg.

The Bellum Caves are situated at about 4.2 kms towards North-West from the lease area and as such no impact is foreseen. However, due precautions are being taken while planning the blast holes and method of blasting.

water table. Hence, no ground water table is likely to be encountered throughout the life of the mine. The water table is below 90m from surface.

ULTIMATE PIT LIMIT

The Ultimate Pit Limit so drawn on the basis of 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 PITLIMIT** is likely to change. The said Ultimate Pit Limit is demarcated on the geological plan and enclosed as **Plate No.4.**

MINE MACHINERIES

The list of required mining machineries for proposed production & drilling blasting planning, currently being used is given in the below table

Table No.26. List of Proposed Mining Machineries

Sl.No.	Equipment / Machinery	No of Units	Capacity
1	Tippers /Trucks	3	10T
2	IR drilling machine	2	83 mm dia, 100 cfm
3	Water Tankers	1	10,000 lit
4	Excavator	3	1.6 Cu.M
5	Front End Loader	2	2.6 Cu.M

The transport of ore from mine head to various customers is through hired tippers or trucks by road from plant.

The adequacy of the machineries is dealt below in detail, considering the standard norms of performance and efficiency.

Drilling:

During review of mining plan period, the maximum handling estimated is about 150,000 Tonnes of ore, 2,721 Tonnes of waste in the year 2020-21. Out of this, about 80% of handling shall require for drilling and blasting. For developing 3m height bench the actual drilling requires 3.3m per hole (10% extra drilling to remove toe as sub grade drilling). The drilling will be done by IR drilling machine with 32mm dia.

Total material handled (max) shall be 150,000 + 2,721 = 152,721(Ore + Waste) tonnes in every year. The drilling and blasting is only 80%.

For developing 3m height bench the actual drilling requires 3.3m per hole.

2.0 MINING

A. OPEN CAST MINING:

a) Briefly describe the existing as well as proposed method for excavation with all design parameters indicating on plans/sections.

The mine was worked with open cast Other than fully mechanized category 'A'. The mining operations and workings are adopted by keeping 3m bench height and the width is 6m. one working pit is opened in the past period in the lease area Mining workings are carried out by IR drilling and blasting. Drilling IR is done by using compressor.

Now, in the proposed review of mining plan in order to operate the mine opencast other than fully mechanised method will be followed. The working operation will be continued from the same pit it will extend in all the directions for extraction of the mineral. The bench height of 3m and the width will be not less than 6m will be maintained. The blasting will be undertaken by controlled blasting with millisecond delay detonators.

The drilling will be done with the IR and the blasting with slurry explosive, with controlled blasting. The blasted/excavated mineral is loaded by excavators into the tippers of 10ton capacity and transported directly to the consumer or buyer. The excavator will be used for extraction and loading of the mineral & waste. The bench slope will be maintained 45^0 slope. The proposed mining layout plan for each year has been shown in **Plate No.6A to 6E**. The waste generating as intercalated waste will be dumped in the temporary dump in the demarcated place as shown in the Proposed Production & Development Plan and later utilized for road development purpose for transport within the mine. The top-soil generated will be temporarily stored in a predetermined area within the lease, later it will be utilized for afforestation purposes. The benches are formed directly in the ore body only. The Limestone Pit will be continued from Pit-1 in the lease area.

The general ground water table is found at a depth of about 55m from the surface in the surrounding areas. The mining operations may reach upto maximum depth of 27m from the surface & bottom Level upto236mRL, which is above the ground

	The Review of Mining Plan is prepared as per the provisions will be submitted to the IBM. The Mining will be carried out as per Review of Mining Plan.
3.Specific end-use grades of Reserves (above economic cut-off grade).	**3. Specific end-use grades of Reserves (above economic cut-off grade).** The end use grade **Limestone** is CaO-35% (Min), MgO- 4% (Max), SiO_2 – 18% (Max) Alkalis- 0.5%(Max). The cut-off grade i.e. CaO-35% (Min), MgO- 4% (Max), SiO_2 – 18% (Max) Alkalis- 0.5%(Max).
4. Specific knowledge of Forest/Non-Forest and other land use data.	**4. Specific end-use grades of Forest/Non-Forest and other Land use data.** The ML is consisting of Patta land. The details are given in review of mining plan in Location & Accessibility.

Justification of UNFC Code

Proved Mineral reserves (121)

Geological Axis: So far, the exploration carried out in the form of exploratory mining in last modification of the mining plan period by 1 no of working pit, 4 No's of core boreholes & 4 No's of DTH boreholes by the lessee in that Limestone mineral is exposed in all three dimension in 1 no of working pit & 4 No's of core boreholes & 4 No's of DTH boreholes upto a 11.3m depth(pit) and 12-30m(boreholes).

The area combining of 1 no of working pit, 4 No's of core boreholes & 4 No's of DTH boreholes is considered for G1. The minerals are a parallel bed lying one upon the other and extending continuously in strike and dip direction. Hence, it is geologically feasible which is considered as Geological Axis '1'.

Feasibility Axis: For Blasting and loading, about 29 employees are required. The approximate estimated cost towards production is **Rs.210/-** per ton. However, there is good demand in market for all grade and size and the usual selling price will be ranging between 350-400 rupees per ton as per the market fluctuation, so Limestone is economically viable. Since mining operations are carried from 2006, since then the limestone is being saleable. Hence, this mining project is feasible, which is considered as Feasibility Axis '2'.

Economic Axis: All the mineable reserves are having saleable grade and its analysis report is showing the grade, the Limestone grade varies from 43.35 to 47.98% of CaO, 1.16 to 3.37% of MgO, 6.87 to 16.54% SiO_2%. Moreover, last two years a sale of mineral show the mining is economical. Hence, it is economically feasible, which is considered as Economic Axis '1'.

Conclusion: This mining project is profitable and viable.

The prefeasibility Study Report is enclosed as **Annexure-XIIIA.**

...can be considered and provided with ... infrastructure and other services.

6.Costing: Detailed break up of capital cost, operating cost, details of working capital.	6.Costing: **Cost of Production** Item / Cost / tons(Rs) Direct cost: (a) Exploration: 10 (b) Mining: 110 (c) Screening & Sorting: -- Over-head cost: 10 Depreciation: 4 Interest: 3 Royalty / Taxes: 63 Deed rent: - Others: 10 TOTAL: 210 This rough cost may change in future depends on the market fluctuation.
7 & 8. Marketing & Economic viability:	7 & 8. Marketing & Economic viability: There is good demand in market for all grade and size and the usual selling price will be more than the production cost, hence Limestone is economical.
9. Other factors:	9. Other factors: The blocked limestone is classified under feasible resource based on the local geology of the area. Hence the resource is estimated under Feasibility mineral resources (221) category.

Table No.25. ECONOMIC AXIS

E1(Economic)	Justification
1. Detailed Exploration.	1. Detailed Exploration. The lease has been explored with 1 no of working pit & 4 No's of core & 4 No's of DTH boreholes. **The distance between the pits** Sl.No. / Particulars / Distance 1 / DTH-1 to CBH-2 / 75m 2 / CBH-2 to CBH-1 / 150m 3 / CBH-1 to CBH-4 / 133m 4 / CBH-4 to DTH-4 / 22m 5 / DTH-4 to DTH-3 / 90m 6 / DTH-3 to DTH-2 / 69m 7 / DTH-2 to CBH-3 / 51m 8 / CBH-3 to CBH-2/DTH-1 / 123/158m **Dimension details of the Working Pits** SL.NO. / WORKING PIT ID / L X W X D 1 / WP-1 / 136 X 196 X 11.3
2. Mining Report / Mining Plan/ working mines.	2. Mining Report / Mining Plan/ Working mines.

<table>
<tr><td>2.Mining:
Mining plan, mine recoveries and efficiencies, equipment selection, man power requirement</td><td>2.Mining:
As proposed in the previous mining plan to operate the mine open cast fully mechanised method will be followed during the review of mining plan period. The working operation will be continued from the same pit; it will extend in all the directions for extraction of the mineral.
The bench height will be maintained 3m and the width will be not less than 6m will be maintained. The drilling will be done with the IR and the blasting with slurry explosive. The blasted/ excavated mineral is loaded by excavators into the tippers of 10-ton capacity and transported to the crushing/screening plant. The Excavator will be using for extraction and loading of the mineral &waste. The bench slope will be maintained 45^0 slopes.
The details of Man Power are furnished in the below table
<table>
<tr><th>Sl. No.</th><th>Category of persons</th><th>No's</th></tr>
<tr><td>1</td><td>Mines Manager cum Engineer</td><td>1</td></tr>
<tr><td>2</td><td>Geologist</td><td>1</td></tr>
<tr><td>3</td><td>Skilled labors</td><td>2</td></tr>
<tr><td>4</td><td>Semi-Skilled Labors</td><td>2</td></tr>
<tr><td>5</td><td>Unskilled</td><td>23</td></tr>
<tr><td colspan="2">Total</td><td>29</td></tr>
</table></td></tr>
<tr><td>3.Environment:
EIA studies and EMP including socio-economic impact, rehabilitation of project affected persons, waste disposal /reclamation. Detailed land use data</td><td>3.Environment:
The base line data will be collected and the land use are mentioned in the below text. The Environmental Clearance will be obtained after the approval of the review of mining plan period.</td></tr>
<tr><td>4.Processing: Pilot scale/industrial scale of investigation data, list of equipment, manpower and environmental considerations like waste disposal of tailings, etc.</td><td>4.Processing:
No processing technique carried.</td></tr>
<tr><td>5.Infrastructure and Services, construction Activities: Full details</td><td>5.Infrastructure and Services, construction activities: These roads would be developed for higher carrying capacities. The approach roads are however sufficient to cater to the proposed production. The lessee will provide infrastructure facilities like office, canteen, rest shelters, drinking water, medical facilities, transport and others. The lessee is having excavator and tippers to cater the produced ore from the mine.
The ML area lies at a distance of about of 2km from Kolimigundla. Tadipatri is the nearest railway station is about 25km from Kolimigundla. The mine is approachable through Bethamcherla-Tadipatri BT road. The villagers in around the mine are mostly depend on agriculture and mining work. Electricity is available in the area and also in the villages. The lessee is also maintaining pucca structures for office, First aid station and shelters. Educational facilities upto 12th standard is available at Kolimigundla Village.</td></tr>
</table>

7	DTH-2 to CBH-3	5 m	
8	CBH-3 to CBH-2/DTH-1	123/158m	

(ii)Trenching: At spacing of 200-300m (iii)Drilling: Closer spaced (with definite grid pattern) than that for G2 category; (iv)Exploratory mining and check drilling results if possible (v)Sampling-Systematic pit and trench sampling, core and sludge sampling for laboratory scale and bulk sample for the pilot plant scale beneficiation studies.	(ii)Trenching-Not carried out. (iii)Drilling: Not carried out. (iv)The exploratory mining is carried out by working pits & core boreholes in the area. (v) Samples were collected from the working pits & core and DTH boreholes for chemical analysis. The standard sampling method of coning and quartering is followed The chemical analysis report of the DTH, core boreholes & pit is enclosed as **Annexure-XIII & X**. The sample locations have been marked on the Geological Plan **Plate No.4.**
5.Petrographic and mineragraphic study: Refining of data on the petrographic character of rocks of the deposit and its surroundings, alterations (if any), including study of grain size texture gangue and its liberation characteristics for further refining of data.	**5. Petrographic and mineragraphic study:** No Petrographic study of character of rocks is carried out.
6. Geostatistical analysis of borehole data thickness of ore: waste encountered in holes, assay values of samples if considered necessary.	**6. Geostatistical analysis:** Not carried out in this area.

Table No.24. FEASIBILITY AXIS

F1(Feasibility study)	Justification
1. Geology: Geology of area and project, detailed exploration, closed spaced drilling, ore body modelling, bulk samples for beneficiation, geotechnical and ground water studies.	**1.Geology:** **Geology of area and project:** The subject area exposes the middle massive limestone unit. The limestone here is grey-dark grey, hard, compact and fine grained (micrite). It is traversed by very thin (<0.1 cm) quartz veins. Limestone has stylolites, which indicate homogeneity of the rock. And towards south-east of the area Limestone belongs slightly flaggy because of increase in argillaceous component. The trend of the bedding in general is NNE-SSW and E-W. the bedding grades from 100-150 towards South East. The subjected area is also partly covered by patches of black cotton soil. The thickness of the black cotton soil is less than 1m and is noticed mainly in the south-western part of the area.

Table No.22. The total category- wise updated reserves and resource as on 13.10.2016

Classification	UNFC Code	Quantity in Million Tonnes	Grade		
(1)	(2)	(3)	(4)		
Total Mineral Resources (A + B)		**Limestone**	**CaO%**	**MgO%**	**SiO_2**
A. Mineral Reserve					
(1) Proved Mineral Reserve	111	--	--	--	--
(2) Probable Mineral Reserve	121	1.03	46.68%	2.26%	11.7%
B. Remaining Resources					
(1) Feasibility Mineral Resource	221	0.76	46.68%	2.26%	11.7%
(2) Prefeasibility Mineral Resource	222	--	--	--	--
(3) Measured Mineral Resource	331	--	--	--	--
(4) Indicated Mineral Resource	332	--	--	--	--
(5) Inferred Mineral Resource	333	--	--	--	--
(6) Reconnaissance Mineral Resource	334	--	--	--	--
Total		1.79			

The threshold limit of IBM for Limestone is CaO-35% (Min), MgO- 4% (Max), SiO_2 – 18% (Max) & Alkalies-0.5 %(Max).

Table No.23. GEOLOGICAL AXIS

G1(Detailed Exploration)	Justification
1.Geological Survey: (i)Mapping-For coal mapping 1:5000 for other minerals 1:1000 (ii)Preparation of detailed topographical-cum-geological map including all surface geological features, extent of deposit, structure, location of boreholes, assay plan and sections of exploratory mine development and borehole data. (iii)Topogrid/triangulation stations/identified fiducials linking in the maps	**1.Geological Survey:** (i) Mapping-surface and geological maps are prepared or 1:1000 scale and enclosed as **Plate No.4.** (ii)The stations are identified and these are linked ir surface plan as shown on the **Plate No.3** and the geologica mapping showing all the surface geological features anc deposit in the area is shown on the **Plate No.4.** The Geological sections of the area in two dimensional view: are shown on **Plate No.5.** (iii)The stations are identified and these are linked in the surface plan as shown on the **Plate No.3.**
2. Geochemical survey: Detailed grid pattern sampling and analysis.	**2.Geochemical survey:** The chemical analysis report of the DTH, core borehole & pit is enclosed as **Annexure-XIII & X.**
3. Geophysical Survey: Detailed and specific borehole geophysical survey.	**3.Geophysical Survey:** The DTH, core boreholes are drilled upto a depth of 12 30m.
4.Technological: (i)Pitting 2 to 5 per sq. km. for simple deposits	**4.Technological:** (i) Pitting –There is 1 No of working pit & 4 No's of core & DTH boreholes in the lease area. The area combining 1 N of working pit & 4 No's of core & 4 No's of DTH borehole are considered for G1 scale of exploration. **The distance between the boreholes**

Sl.No.	Particulars	Distance
1	DTH-1 to CBH-2	75m
2	CBH-2 to CBH-1	150m
3	CBH-1 to CBH-4	133m
4	CBH-4 to DTH-4	22m
5	DTH-4 to DTH-3	90m
6	DTH-3 to DTH-2	69m

DETAILED CALCULATIONS FOR BLOCKED RESERVE OUTSIDE THE ULTIMATE LIMIT & WITHIN THE SAFETY ZONE OF KOLIMIGUNDLA LIMESTONE MINE

G-1 SCALE OF EXPLORATION (UNFC CATEGORY-221)

Sections	LIMESTONE: Area in m^2	Sectional Influence in m	Volume in m^3	Qty @ B.D. 2.25 with Rec 98% in tonnes	Intercalated waste @ B.D. 2.0 with Rec 2% in tonnes	TOP SOIL: Area in m^2	Volume in m^3	Qty @ Rec 100% & B.D. 2.0 in tonnes	Total Waste in Tonnes
AA'	503	50	25,174	55,508	1,007	0.1	6	13	1,020
BB'	457	50	22f,873	50,434	915	-	-	-	915
CC'	611	50	30,543	67,348	1,222	0.3	13	25	1,247
DD'	1,087	50	54,335	119,808	2,173	0.6	30	61	2,234
EE'	810	50	40,514	89,332	1,621	0.2	12	23	1,644
Total in tonnes				382,430	6,938			122	7,059
Total in million tonnes				0.38	0.01			0.0001	0.01

DETAILED CALCULATIONS FOR BLOCKED RESERVE BEYOND THE SAFETY ZONE OF KOLIMIGUNDLA LIMESTONE MINE

Sections	LIMESTONE: Area in m^2	Sectional Influence in m	Volume in m^3	Qty @ B.D. 2.25 with Rec 98% in tonnes	Intercalated waste @ B.D. 2.0 with Rec 2% in tonnes	TOP SOIL: Area in m^2	Volume in m^3	Qty @ Rec 100% & B.D. 2.0 in tonnes	Total Waste in Tonnes
AA'	456	50	22,806	50,288	912	5	246	493	1,405
BB'	546	50	27,279	60,150	1,091	8	391	782	1,873
CC'	498	50	24,915	54,937	997	10	511	1,023	2,019
DD'	1,461	50	73,058	161,092	2,922	26	1,323	2,646	5,568
EE'	492	50	24,611	54,268	984	9	445	889	1,874
Total in tonnes				380,735	6,907			5,833	12,739
Total in million tonnes				0.38	0.01			0.01	0.01

l) Mineral Reserves/Resources:

Mineral Resources: (Mineral resources may be estimated purely based on level exploration, with reference to the threshold value of minerals declared by IBM)

Table No.21. Summary of Mineral Reserves/Resources

Level of Exploration	Resource in million tons	Grade
	Limestone	
Proved Mineral Reserves (121)	1.03	46.68%
Feasibility Mineral Resources (221)	0.76	
TOTAL	**1.79**	

The detailed section-wise areas, volume calculations of geological reserves/resource are tabulated in a tabular form are enclosed in the following table

Table No.16. The detailed calculations of Geological Reserves & Resources

DETAILED CALCULATIONS FOR GEOLOGICAL RESERVE/RESOURCE FOR KOLIMIGUNDLA LIMESTONE MINE									
LIMESTONE						TOP SOIL			
Sections	Area in m^2	Sectional Influence in m	Volume in m^3	Qty @ B.D. 2.25 with Rec 98% in tonnes	Intercalated waste @ B.D. 2.0 with Rec 2% in tonnes	Area in m^2	Volume in m^3	Qty @ Rec 100% & B.D. 2.0 in tonnes	Total Waste in Tonnes
AA'	1,362	50	68,085	150,127	2,723	7	339	678	3,401
BB'	3,021	50	151,062	333,091	6,042	8	391	782	6,825
CC'	4,484	50	224,212	494,387	8,968	32	1,614	3,228	12,197
DD'	5,397	50	269,859	595,040	10,794	72	3,584	7,168	17,963
EE'	2,042	50	102,109	225,151	4,084	37	1,834	3,669	7,753
Total in Tonnes				1,797,796	32,613			15,525	48,138
Total in Million Tonnes				1.79	0.03			0.02	0.05

Based on the exploration, available measured field data, exposure in the lease area and adjoining area entire geological sections are updated and ore reserves have been freshly-estimated as on **13.10.2016.**

Table No.17. The Summary of Mineable Reserve

CATEGORY	RESOURCE IN MILLION TONNES	GRADE
	LIMESTONE	CaO
Proved Mineral Reserves (121)	1.03	46.68%
TOTAL	**1.03**	

Table No.18. The detailed calculations of Mineable Reserves

DETAILED CALCULATIONS FOR MINEABLE RESERVE FOR KOLIMIGUNDLA LIMESTONE MINE									
LIMESTONE						TOP SOIL			
Sections	Area in m^2	Sectional Influence in m	Volume in m^3	Qty @ B.D. 2.25 with Rec 98% in tonnes	Intercalated waste @ B.D. 2.0 with Rec 2% in tonnes	Area in m^2	Volume in m^3	Qty @ Rec 100% & B.D. 2.0 in tonnes	Total Waste in Tonnes
AA'	402	50	20,105	44,331	804	2	86	172	976
BB'	2,018	50	100,879	222,439	4,035	-	-	-	4,035
CC'	3,375	50	168,754	372,102	6,750	22	1,090	2,180	8,930
DD'	2,849	50	142,467	314,139	5,699	45	2,231	4,462	10,161
EE'	740	50	36,985	81,551	1,479	28	1,378	2,756	4,235
Total in tonnes				1,034,563	18,768			9,570	28,338
Total in million tonnes				1.03	0.02			0.01	0.03

Table No.19. The Summary of Blocked Reserves & Resources

CATEGORY	RESOURCE IN MILLION TONS	SCALE OF EXPLORATION
	LIMESTONE	
Feasibility Mineral Resources (221)	0.76	G1
TOTAL	**0.76**	

Table No.20. The detailed calculations of Blocked Reserves

of each section is measured and multiplying sectional interval and tonnage is arrived by multiplying with its bulk density.

The bulk density is considered as 2.25t/Cu.M for Limestone & 2.0t/Cu.M for waste with recovery taken as 98% and 2% for intercalated waste, the resources and reserves are estimated as per UNFC guidelines.

Proved Mineral Reserves (G1 scale of exploration) are the reserves established based on the 1 No of working pit, 4 No's of core boreholes & 4 No's of DTH boreholes at an interval of 200m x 200m, the limestone deposits are exposed in the three dimensions which is explored during the previous excavation of the area is considered as Proved Mineral Reserves UNFC code is taken as 121.

Blocked mineral reserves in UPL & 7.5m safety zone barrier UNFC code is considered as 221.

All the G1 scale of exploration zone and limit are shown on the Geological Plan & Sections as **Plate No.4 & 5** respectively.

Table No.15. The detailed summary of Geological Reserve/Resource as on 13.10.2016.

Level of Exploration	Resource in million tonnes	Grade
	Limestone	CaO
G1–Detailed Exploration	1.79	46.68%
TOTAL	**1.79**	

The threshold limit of IBM for Limestone is CaO-35% (Min), MgO-4% (Max), SiO_2–18% (Max) & Alkalies-0.5 %(Max).

The feasibility study report along with financial analysis for economic viability of the deposit as specified under the UNFC field guidelines is enclosed as **Annexure-XIV.**

k) Furnish detailed calculation of reserves/resources section wise (When the mine is fully mechanized and deposit is of complex nature with variation of size, shape of mineralized zones, grade due to intrusion within ore zone etc., an attempt may be made to estimate reserves/resources by slice plan method). In case of deposits where underground mining is proposed, reserve/resources may be estimated by level plan method, as applicable, as per the proposed mining parameters

dimensional view in working pit and the area enclosed in 1 no of working pit, 4 No's of core boreholes & 4 No's of DTH boreholes in less than 200m X 200m interval are considered for G1 scale of exploration. The depth of the limestone is proved upto a maximum 30 m from the surface by the exploration of DTH bore hole No. -1 as shown in the section D-D'. But depth of the UPL is considered upto 236MRL only based on the existing parameter as per the sections. The ore body exposed in the pit varies from 11.3m depth from the surface in the pit and upto 12-30m depth in the boreholes. Hence, it is geologically explored which is considered as Geological Axis '1'.

iii) For Blasting and loading, about 29 employees are required. The approximate estimated cost towards production is **Rs.210/-** per ton. However, there is good demand in market for all grade and size and the usual selling price will be ranging between 350-400 rupees per ton as per the market fluctuation, so Limestone is economically viable. But as the lessee has not obtained any clearance for environment, consent for establishment & consent for operation, it is considered as pre-feasible which is taken as Feasible Axis '2'.

iv) Based on the exploration with existing working pit, trail pits and its analysis, review of mining plan period is prepared as per the provisions & will be submitted to the IBM. The reserves have been ascertained above economic cut-off grade i.e. CaO-35% (Min), MgO-4% (Max), SiO_2–18% (Max) & Alkalies-0.5%(Max) and by considering all above factors the mining is economical. Hence it is considered as Economical Axis '1' & Reserves are blocked in UPL & 7.5m safety zone barrier code is considered for economical axis is 2.

v) The combining of EFG axis the UNFC code for reserves is assigned as 121. The data of mineral exposed in three dimensional views of the working pit, core & DTH boreholes in the mining area is taken into consideration for reserve estimation.

The estimation of ore reserves is made by using cross-section method using cross-sectional area method. The geological cross sections are prepared at an interval of 50m, across the strike of the ore body. The area of individual litho-units in each

The resource is estimated as per UNFC classification. Geological Sections are prepared on a scale of 1:1000 is enclosed as Plate No.5.

i) Broadly indicate the future programme of exploration with due justification taking into consideration the future tentative excavation programme planned in next five years as in table below:

During this proposed review of mining plan period 2 No's of boreholes are proposed in the pit to know the extent of the ore. The locations of the proposed core boreholes are indicated on the Geological Plan and is enclosed as Plate No.4.

Table No.13. The year-wise boreholes proposals

YEAR	BOREHOLE ID	DEPTH IN M	CO-ORDINATES	
			EASTING	NORTHING
2017-18	PDTH-1	20	E 190786.0390	N 1668888.8529
	PDTH-2	20	E 190721.0745	N 1668865.3832

Table No.14. The summary of year-wise proposals

Year	No. Of Boreholes (Core/RC/DTH)	Grid interval	Total meterage	No. of Pits dimensions and volume	No. of Trenches, dimensions and volume
2017-18	2 (PDTH)	--	40	---	---
2018-19	---	--	--	---	---
2019-20	---	--	--	---	---
2020-21	---	---	---	---	---
2021-22	---	---	---	---	---

j)Reserves and Resources as per UNFC with respect to the threshold value notified by IBM may be furnished in a tabular form as given below:

Submit a feasibility study report along with financial analysis for economic viability of the deposit as specified under the MEMC rules may be incorporated.

The reserves are furnished according to the MEMC Rules, the cutoff grade and threshold values considered for reserves estimation. For the ascertaining of UNFC code following procedure is adopted.

i)The category of the deposit as per MEMC Rules comes under Category-I of Stratiform & Tabular Deposit of Regular Habit, since the deposit is of sedimentary origin & bedded deposit having no structial disturbances.

ii) The status of exploration is taken as G1 scale of exploration, because lessee has explored the area with 1 no of working pit, 4 No's of core boreholes & 4 No's of DTH boreholes in a closed interval grid pattern. The Limestone is proved in three-

iv) Expenditure incurred in various prospecting operations

During the modification of mining plan the lessee has explored are by drilling CBH & DTH boreholes. The expenditure incurred in drilling CBH boreholes during the year 2013-14, for total run of 80m is Rs. 260,000/- & for drilling DTH Holes during the year 2016-17, for total run of 108m is **Rs. 351,000/-**. So, the total expenditure incurred in prospecting operations is Rs. 611,000/-.

f) The surface plan of the lease area may be prepared on a scale of 1:1000 or 1:2000 with contour interval of maximum of 10m depending upon the topography and size of the area duly marked by grid lines showing all features indicated under Rule 28(1)(a) of MCDR 1988.

The surface plan of the lease area has been prepared on a scale of 1:1000 with contour interval of 1m marked by grid lines showing all features and is enclosed as PlateNo.3.

g) For preparation of geological plan, surface plan prepared on a scale of 1:1000 or 1:2000 scale specified under para 1.0 (f) of Part A of the format may be taken as the base plan. The details of exploration already carried out along with supporting data for existence of mineral, locations proposed exploration, various litho units along with structural features, mineralized/ore zone with grade variation if any may be marked on the geological plan along with other features indicated under Rule 28 (1) (b) of MCDR 1988.

The Geological Plan of the lease area has been prepared on a scale of 1:1000 with contour interval of 1m by gridlines showing all features. In that all surface features and litho-units along with working pit, DTH & core-boreholes are marked and are enclosed as **Plate No.4**.

h) Geological sections may be prepared on natural scale of geological plan at suitable interval across the lease area from boundary to boundary.

The estimation of ore reserves is made by using the cross-sectional area method. The Geological Cross-Sections are prepared at an interval of 50m, across the strike of the ore body. In that geological cross sections are drawn by considering litho-units as per the lithologs from the core & DTH boreholes and existing working pit.

Table No.11. The details of drilled DTH boreholes depth & location

YEAR	BOREHOLE ID	DEPTH IN M	CO-ORDINATES	
			EASTING	NORTHING
2016-17	DTH-1	30	190611	1668974
	DTH-2	29	190678	1668778
	DTH-3	26	190745	1668778
	DTH-4	23	190829	1668809

The intimation letter for drilling of DTH boreholes (Form-J) is enclosed as **Annexure-X** and the lithologs of the core & DTH boreholes (Form-K) is enclosed as **Annexure-XI**. The chemical analysis report of the 4 No's of core & DTH boreholes is enclosed as **Annexure-XII** & for pit is enclosed as **Annexure-IX**. The NABL Accredited Laboratory Certificate is enclosed as **Annexure-XIII**.

iii) Details of samples analysis indicating type of sample (surface/sub-surface from pits/trenches/borehole etc.) complete chemical analysis for entire strata for all radicals maybe undertaken for selected samples from a NABL accredited Laboratory or Government laboratory or equivalent. Entire mineralized area may be analyzed meter wise with 10% of check samples.

1 No of sample is collected from the working pit and 80 No's of samples from the CBH & 108 samples from DTH boreholes are collected meter wise, the same is subjected to coning and quartering and sent for chemical analysis to the NABL accredited laboratory.

Sampling & Methodology:

A sample is collected at each meter core sample place by cutting half section. The cutting is made to the entire length of the core to a half of the core dia. the sample is collected on a tarpaulin. After collecting the sample, the same is made coning and quartering and submitted to the laboratory. The samples collected from the pits and DTH boreholes are analyzed and the analysis report has been enclosed as **Annexure-XI & XII**. The sample locations have been marked on the Geological Plan **Plate No.4.**

Table No.12. The result of these samples shows an average grade of Limestone

RADICALS IN %	AVERAGE GRADE OF LIMESTONE
SiO_2	11.7%
CaO	46.68%
MgO	2.26%

d)	(i)	Name of prospecting /exploration agency	M/s. Sri Sainath Minerals, Prop. Sri. P. Bayapu Reddy, H.No.102, Preethi Residency, Near Aravind Ashram, YMR Colony, Proddatur, Y.S.R. Kadapa District, Andhra Pradesh.
	(ii)	Address	
	(iii)	E mail address: Phone no.	pbrssminerals@gmail.com +91 9440008718

e) Details of Prospecting /Exploration already carried out:

i) Number of pits and trenches indicating dimensions, spacing etc. along and across the strike/ foliation with reference to geological plan.

In the modification of the mining period, the lessee has explored the area with 1 No of working pit for exploration of Limestone, upto a depth of 11.3m from the surface. The working pits are shown on the Geological Plan **Plate No.4.**

Table No.9. The details of working pits depth and locations

EXISTING WORKING PITS LOCATIONS						
SL.NO.	WORKING PIT ID	NORTHING	EASTING	L X W X D (Max RL-Min RL)	LITHOLOGY	Remarks
1	WP-1	1668825 to 1668960	190677 to 190872	136 X 196 X 11.3 (261.4-250.1)	0-0.5m Soil 0.5-11.3m Limestone	Refer **Annexure-X & XA**

ii) Number of boreholes indicating type (Core/RC/DTH), diameter, spacing, azimuth & inclination, Collar level, depth etc. with standard borehole logs duly marking on geological plan/sections.

In the mining plan period, the lessee has explored the area with 4 No's of core boreholes for exploration of Limestone, upto a depth of 12-25m from the surface.

Table No.10. The details of drilled core boreholes depth & location

YEAR	BOREHOLE ID	DEPTH IN M	CO-ORDINATES	
			EASTING	NORTHING
2013-14	CBH-1	25	190833	1668954
	CBH-2	25	190683	1668952
	CBH-3	18	190675	1668829
	CBH-4	12	190847	1668822

And during the period 2016-17, the lessee has explored the area with 4 No's of DTH boreholes in order to access the depth of the ore. These boreholes were drilled to a depth of 23-30m from the surface. The location of the core & DTH boreholes is shown on the Surface & Geological Plan **Plate No.3 & 4** respectively.

Upper flaggy limestone: Flaggy nature due to some argillaceous matter.
Middle massive limestone: Compact and breaks with conchoidal fracture.
Lower flaggy limestone: Flaggy nature due to some argillaceous matter.
It is mostly the massive unit that forms the backbone of the cement industry in the area. The flaggy limestone generally finds its use as building-stone.

c) Detailed description of geology of the lease area such as shape and size of the mineral/ore deposit, disposition various litho-units indicating structural features if any etc.

The subject area exposes the middle massive limestone unit. The limestone here is gray-dark gray, hard, compact and fine grained (micrite). It is traversed by very thin (<0.1 cm) quartz veins. Limestone has stylolites, which indicate homogeneity of the rock.

And towards south-east of the area Limestone belongs slightly flaggy because of increase in argillaceous component. The trend of the bedding in general is NNE-SSW and E-W. the bedding grades from 10^0-15^0 towards South East. The subjected area is also partly covered by patches of black cotton soil. The thickness of the black cotton soil is less than 1m and is noticed mainly in the south-western part of the area.

Thickness of the Limestone:

The thickness of the limestone has been found based on the geological cross-sections. The field information has been collected and geological cross-sections are drawn along the core boreholes. From the cross-sections, the overall thickness has been calculated considering the width and the dip of the formation and it is found to be 25m on an average.

Origin:

It is a sedimentary rock formed as a chemical precipitate in a starved Kurnool sub-basin. The dark colour of limestone indicates the euxinic condition of formation. The grain size is very fine. On petrographic consideration, it can be classified as micrite. The rock gives metallic sound when hit with a hammer.

Therefore, charge/hole	=	16.83 tonnes/4.68 tonnes/kg = 3.6kg
Total drilling meterage is 29,945m		
The number of hole required is	=	29,945m/3.3m = 9,074 No's
Total explosive required is	=	9,074 x 3.6 = 32,666kg
The yield per hole is	=	1.5 x 2.0 x 3.3 X 2.125 X 0.80 = 16.83 Tonnes
Power factor	=	16.83 Tonnes/3.60kg = 4.68.

(d) Whether secondary blasting is needed, if so describe it briefly

The secondary blasting will not be there. If any boulder comes with excavator it will be broken or with by hammer manually it will be broken.

Storage of explosives:

The blasting will be given to outsourcing to the authorized agency who having the valid explosive license from the Explosive commissioner. The storage of explosive is not proposing in the lease area as the authorized agency directly will bring the explosive and blasted the drilled holes and takes back the un-used explosive from the mine.

The tippers requirement calculated as under:

The maximum handling estimated is about 150,000 tonnes of Limestone Ore, 2,721 Tonnes of waste and 3,742 Tonnes of top soil in the year 2020-21.

=156,463 Tonnes/300 days/7 hours per day /6 trips per tipper/10 Tonnes =1.24 No's = ~2 No's.

Assuming 80% availability and spare considering the tipper, requirement is 3 No's.

The requirement of excavators is calculated as under:

The bucket capacity of the excavator available is 1.6m^3. The average bulk density of ore and waste is considered as 2.125 tonnes/Cu.M.

The loading capacity of the Excavator (tonnes / hour) = Excavator bucket capacity (m^3) X passes in minutes X 60 minutes X 90% efficiency X Avg. Bulk Density

=1.6 m^3 X 2 pass/ minutes X 60 X 90% X 2.125

= 367.20 Tonnes/hour

Say 367 Tonnes/hour is the loading capacity of the excavator. Therefore, maximum to be handle 2020-21.

Total 156,463(150,000 + 2,721 + 3,742) = 156,463 (Ore +Waste + Top Soil) tonnes to handle max in one year.

The requirement of excavators is calculated as under.

i.e. 156,463 tonnes / 300 days = 521.54 tonnes/day

Therefore, for 7 hours effective working hours, the handling shall be

521.54 tonnes/day / 7 hours = 74.51 tonnes/hour

As one excavator handle 367 tonnes/hour minimum one excavator is required to cater the need.

The requirement of front head loader is calculated as under:

The front head loader is required to handle the minerals and reject in the crushing and screening plant for loading and stack maintenance.

The loading capacity of the front head loader (tonnes / hour) =

Front end loader bucket capacity (m^3) X filling factor (%) X loose density (Tonnes/m3) X passes in minutes X 60 minutes X 80% efficiency X Avg. Bulk Density =

2.6 m^3 X 2 pass/ minutes X 60 minutes X 80% X 2.125= 530.4 tonnes/hour

However, 530 tonnes / hour is the loading capacity of the front-end loader.

Therefore, to handle maximum 150,000 + 2,721 + 3,742= 156,463 (Ore + waste + Top Soil) = 156,463 max in a year. The requirement of loader is calculated as under.

i.e. 156,463 tonnes / 300 days = 521.54 Tonnes/day

Therefore, for 7 hours effective working hours, the handling shall be

521.54 Tonnes / 7 hours = 74.51 Tonnes/hour

As one loader handle, can load 74.51Tonnes/hour, minimum one front end loader is required to cater the need.

a) Indicate year-wise tentative Excavation in Cubic Meters indicating development, ROM, pit wise as in table below.

(I)Insitu Tentative Excavation

As Per proposed exploration the depth persistence may increase so that the reserves may increase, it gives the longer mining operation is possible.

During the Review of Mining plan period working will be done from sections, A-A' to E-E' and the mining depth will vary from 261mRL to 237mRL in the Limestone.

The proposed year wise production and development are shown on the Production

& Development Plan is enclosed as Plate No.6A to 6E. The year wise proposed production and development details are furnished in the following table

Table No.27. The year-wise excavation details of Limestone Ore

Year	Pit No.	Total Tentative Excavation (Cu.M)	ROM (Cu.M)		ROM Waste Ratio	Top Soil (Cu.M)
			Ore (Cu.M) *	Intercalated Waste (Cu.M)		
1	2	3	7	6	10	
2017-18	1	68,028	66,667	1,361	1:0.02	--
2018-19	1	68,277	66,667	1,361	1:0.02	--
2019-20	1	68,315	66,667	1,361	1:0.02	249
2020-21	1	69,899	66,667	1,361	1:0.05	287
2021-22	1	68,197	66,667	1,361	1:0.02	1,871

* Tentative tonnage of the ore may be arrived by computing approximate bulk density of 2.25 for ore and 2.00 for waste and recovery factor of 98% as these data are variable and may be established on time series.

Table No.28. Detailed calculations of year-wise production and development reserves

DETAILED CALCULATIONS OF PRODUCTION & DEVELOPMENT FOR KOLIMIGUNDLA LIMESTONE MINE										
LIMESTONE							TOP SOIL			
Year	Section	Area in m^2	Influence in m	Volume in m^3	Quantity in tonnes Rec 98% & B.D. 2.25	Intercalated waste Qty in tonnes 2% Rec	Area in m^2	Volume in m^3	Qty in tonnes @ Rec 100% & B.D. 2.0	Total Waste in tonnes
2017-18	AA'	156	50	7,792	17,181	312	-	-	-	312
	BB'	1,205	50	60,236	132,819	2,409	-	-	-	2,409
2018-19	BB'	336	50	16,817	37,082	673	-	-	-	673
	CC'	1,024	50	51,210	112,918	2,048	5	249	497	2,546
2019-20	CC'	1,361	50	68,027	150,000	2,721	6	287	574	3,295
2020-21	CC'	339	50	16,936	37,343	677	7	361	722	1,400
	DD'	1,022	50	51,092	112,657	2,044	30	1,510	3,020	5,064
2021-22	EE'	1,361	50	68,027	150,000	2,721	3	169	338	3,059
Total in tonnes					750,000	13,605			5,152	18,758
Total in Million tonnes					0.75	0.01			0.01	0.02

b) Enclose Individual year wise development plans and sections showing pit layouts, dumps, stacks of mineral reject, if any, etc. in case of "A" category mines. Composite development plans showing pit layouts, dumps, stacks of mineral reject, if any, etc. and year wise sections in case of 'B' category mines.

The entire strike length of the Limestone body will be worked, due to nature of the formation; the benches are laid along and across the strike direction. During review of mining plan period, the mining activity will be carried-out upto depth 237mRL will be reached. The proposed year wise production and development are shown on the Production & Development Plan is enclosed as **Plate No.6A to 6E**. The year wise proposed production and development details are furnished in the following table:

Table No.29. The Locations of the proposed workings

LIMESTONE				
Review of Mining Plan Period	Locations		Working Face mRL	Section
	Easting	Northing		
2017-18	E 190724 to 190860	N 1668840 to 1668954	258 to 240	A-A' & B-B'
2018-19	E 190639 to 190861	N 1668818 to 1668969	261 to 237	B-B' & C-C'
2019-20	E 190854 to 190856	N 1668813 to 1668945	261 to 237	C-C'
2020-21	E 190677 to 190855	N 1668779 to 1668935	261 to 237	C-C' & D-D'
2021-22	E 190684 to 190816	N 1668776 to 1668920	261 to 237	D-D'

For this mine, the rejects include intercalated waste and top soil. For the review of mining plan period the quantity of waste to be handled only intercalated waste will be **6,805Cu.M.** The year-wise generated intercalated waste will be dumped in a temporary dump & later used for road development, the produced waste will be used for road maintenance in the next year and the soil will be utilized for afforestation purposes in monsoon period as shown in the year-wise production and development plan which is enclosed as **Plate No.6A to 6E.**

Table No.30. The details of year-wise waste generation and location of dumping

Year	Intercalated Waste in m³	Total Waste in m³	Location of Dump	
			Easting	Northing
2016-17	1,361	1,361	E 190538.9837 to190547.1388	N 1669365.1085 to 1669358.6165
2017-18	1,361	1,361	E 192565.3439 to192573.5064	N 1669224.0706 to1669230.6741
2018-19	1,361	1,361	E 193726.6223 to193734.7740	N 1668821.4022 to 1668814.8370
2019-20	1,361	1,361	E 193712.7516 to 193718.2591	N 1669227.8647 to1669236.8297
2020-21	1,361	1,361	E 190699.5369 to 190706.6283	N 1668821.2850 to 1668813.6324
Total	**6,805**	**6,805**	E 190694.9728 to 190706.6362	N 1668825.1702 to 1668812.6761

c) Describe briefly giving salient features of the proposed method of working indicating category of mine

The mine is being worked for lime stone deposit is open cast fully mechanized category "A".

The working operation will be continued from the same existing pit; it will extend in all the directions for extraction of the mineral. The bench height 3m and the width will be not less than 6m will be maintained, where the benches of more than 3m the same will be brought to 3m. The bench slope will be maintained 45⁰ slopes. The drilling will be done with the IR and the blasting with slurry explosive. The

blasted/excavated mineral is loaded by excavators in to tippers of 16ton capacity and transported directly by the consumers or buyers. The Excavator will be used for extraction and loading of the mineral & waste.

e) Describe briefly the layout of mine workings, pit road layout, the layout of faces and sites for disposal of overburden/waste along with ground preparation prior to disposal of waste, reject etc. A reference to the plans and sections may be given. UPL or ultimate size of the pit is to be shown for identification of the suitable dumping site

The entire strike length of the Limestone body will be worked, due to nature of the formation; the benches are laid along and across the strike direction. During the review of mining plan period, the mining activity will be carried-out upto depth will be reached 237mRL. The ore and waste will be exploited separately. The waste will be carried to the temporary waste dump and it will be disposed-off. The ore will be carried to the crushing plant for further process. The roads within the pit will be maintained at 1:16 gradient. The top soil that overlies the ore body which forms the minor mine waste.

The recommended specifications with regard to the total area of dumping, angle of repose, terracing, etc., the dumps usually contain potential loose soil materials. The waste can contaminate the adjacent forest, agriculture fields, water tanks, etc., with suspended sediments. Therefore, to protect the environment from further losing its quality, the OB dumps need to be stabilized by employing various engineering and biological measures. The dumping will be made by retreating method and terraced properly.

In general, in order to ensure the stability of OB dumps and to prevent the material from entering into the outside lease area. The proposed OB dumps will be made into terraces with appropriate height and angle of reposes and should be covered with afforestation (seed broadcasting and seedlings planting).

For this mine, the rejects include intercalated waste and top soil. For the review of mining plan period the quantity of waste including top soil to be handled will be 9,381Cu.M. The year-wise generated intercalated waste and soil will be dumped in

a temporary dump as shown in the year-wise production and development plans which is enclosed as **Plate No.6A to 6E.**

Ultimate Pit Limit:

Taking into consideration the available exploration data, structural parameters of the ore body and the updated geological mapping, final Pit lay-out is designed by maintaining 45° pit slope angle along the hanging wall side and foot wall side The Final Pit Limit so defined may remain tentative as the exploration is yet to be taken.

Now the proposed mining plan is proposed to operate the mine by open cast fully mechanised method of mining. The lease area containing old working pit before starting of the mining operation, the same pits are continued with systematic and scientific method of mining. The working operation will be continued from the same pit; it will extend in all the directions for extraction of the mineral. The bench height will be maintained 3m and the width will be not less than 6m will be maintained. The bench slope will be maintained 45^0 slopes.

The drilling will be done with the Jackhammer drill and the blasting with slurry explosive. The blasted/excavated mineral is loaded by excavators into tippers of 10-ton capacity and transported to the crushing & screening plant. The excavator will be used for extraction and loading of the mineral & waste. The ore and waste will be exploited separately.

The waste will be carried to the temporary dump and it will be disposed-off. The ore will be carried to the crushing plant for further process. The required size of the material will be varied depending on the customer requirement. The lease containing Limestone are shown in the Geological Plan. The proposed mining layout plan for each year has been shown in **Plate No.6A to 6E.** The waste generating as intercalated waste and top soil will be dumped in the demarcated place as show in the Proposed Production & Development Plan. The benches are formed directly in the ore body only. The Limestone pit will be continued from Pit-1 in the North-East direction of the lease area.

f) Conceptual Mine planning upto the end of lease period taking into consideration the present available reserves and resources describing the excavation, recovery of ROM, Disposal of waste, backfilling of voids, reclamation and rehabilitation showing on a plan with few relevant sections

For any mine, preparation of conceptual mine plan amounts to, fore-seeing in totality and planning for mining and related activities through-out its life span, till such time all the usable ore minerals are exhausted to the economical limits and lease area is reclaimed to the extent possible. Apart from physico-chemical and mineralogical parameters which form primary basis for compilation of conceptual mine plan, several other factors such as grade of sub- grade ores, marketability and the norms laid down by the Government agencies from time to time do play important roles. With ever increasing and changing needs of humanity, coupled with technological advancements, sub grade ores of the date become marketable ores in future.

Therefore, preparation of ideal conceptual mine plan for any mine is tentative and such plan prepared, remains acceptable only under given circumstances. It cannot be overlooked that; any such plan undergoes amendments and revisions in the course of progressive stages of exploration and exploitation.

It is always borne in mined to bring back near natural shape to the area and its economic value is elevated. It is further ensured that, there is positive contribution to the environment and socio-economic development of the region.

Based upon re-estimated and updated ore reserves by considering only Proved Reserves of **460,764Cu.M**, the maximum production capacity is **66,667Cu.M** (150,000 tonnes) per annum and market demands the life of the mine is expected to be about **6.91(say 7 years)**. The life of the mine will be revised after completion of the proposed exploration and reassessment of reserves.

The proposed review of mining plan period exploration, the reserves will be reassessed. On that reserve, further sustainability of mining will be done upto the life of the mine.EC for higher production will be obtained from MOEF, after the approval of mining plan.

The ore bearing area will be fully mechanically mined-out upto the ultimate pit limit maintaining required bench height and width with due consideration for slope stability. The whole of the pit area is proposed for reclamation by ground water discharge.

During this proposed review of mining plan period 1 No of core boreholes are proposed in the existing pit in order to prove the existence of the ore body and the locations of the proposed core boreholes are indicated on the Geological Plan and is enclosed as **Plate No.4.**

Table No.31. The year-wise DTH boreholes proposals

YEAR	BOREHOLE ID	DEPTH IN M	CO-ORDINATES	
			EASTING	NORTHING
2017-18	PDTH-1	20	E 190786.0390	N 1668888.8529
	PDTH-2	20	E 190721.0745	N 1668865.3832

(a) Exploration programme during conceptual period:

During the conceptual period exploration, will be proposed based on the results of the boreholes as proposed to be drilled during review of mining plan period.

(b) Mine Development (ultimate pit limit) optimum exploitation and utilization of minerals:

Taking into consideration the available exploration data, structural parameters of the ore body and the updated geological mapping, final Pit lay-out is designed by maintaining 45° pit slope angle on both sides. The Final Pit Limit so defined may remain tentative as the exploration is on-going process along with the mining operations. The Conceptual Plan and Sections are enclosed as **Plate No.8 & 9.**

Table No.32. The quantum of proposed production for the review of mining plan

Period	Proposed Production in Cu.M	Cumulative Area under Mining in Ha.
Review of Mining Plan (2017-18 to 2021-22)	333.335	3.076
Total	**492,605-333,335= 159,270 (Remaining Reserves)**	**3.076(Ultimate area Under Mining)**

(c) Waste Management The proposed dumping area is within the lease area devoid of any mineral resources. The dumping area is located on the south-western portion of the lease area beyond the ultimate pit limit.

The topography of the area selected is having gentle slope with wide contours, thereby minimizing wash off and erosion. The adequate soil moisture conservatory measures and dump management structures will be taken care off while dumping. During the entire life of the mine, **14,189Cu.M** of intercalated waste rock including the top soil is likely to be generated. The area selected for the dumping is about 0.02Ha will be used for dumping **6,805**Cu.M of waste generated in this review of mining plan period.

This is adequate for dumping as the area proposed is located south western side within lease area which is shown on the Conceptual Plan is enclosed as **Plate No.8.** The overall dump slope will not exceed 28^0.

Table No.33. The quantum of proposed development quantities for review of mining plan.

Period	Proposed development in Cu.M	Cumulative Area under dumping in Ha.
Review of Mining Plan Period (2017-18 to 2021-22)	6,805	0.02
Total	**6,805**	

The ultimate disposition and advancement of dumps is shown in Conceptual Plan enclosed at **Plate No.8.**

(d) Pit layout:

The entire strike length at the ore body will be worked, due to flatness of the formation; the benches are laid along and across the strike direction. The advancement of the benches will be towards W-E and S-N and all along strike direction at the ore body. During the review of mining plan period the mining activity will be carried-out for strike length of the ore body & depth will be reached 237mRL. The same method of mining will be continued upto the conceptual period.

(e) Ultimate pit limit:

Taking into consideration the available exploration data, structural parameters of the ore body and the updated geological mapping, final Pit lay-out is designed by maintaining 45° pit slope angle along the hanging wall side and foot wall side.

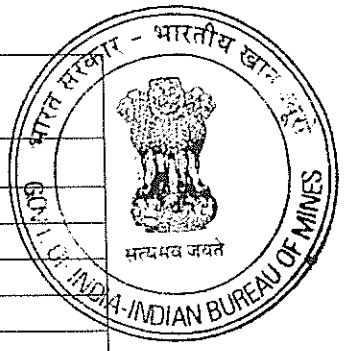
The Final Pit Limit so defined may remain tentative as the exploration is yet to be proved. Conceptual Plan and Sections are enclosed as **Plate No.8 & 9** respectively.

(f)Top-soil utilization:

During this review of mining plan period **2,576Cu.M** of top soil is generated. The generated top soil will be stored temporarily within the lease area and later on used for plantation and agriculture purposes in the safety zone.

Year wise generated top soil is given in below table:

Proposed year	Top Soil in m³
2017-18	--
2018-19	249
2019-20	287
2020-21	1,871
2021-22	169
2017to 222	**2,576**



(g) Reclamation:

The land restoration and reclamation is very much essential in any mining industry. Due to the mining activity in this area, there will be change in the ground profile in the form of pit and waste dumps. The ore bearing area will be mechanically mined-out upto the ultimate pit limit maintaining required bench height and width with due consideration for slope stability.

During conceptual period the entire mining area is proposed for ground water-charging by rain water harwesting which will be beneficial for the lessee and the people living in the nearby villages as there is less source of water.

(h) Drainage:

There are no surface water sources with-in the core zone. The drainage pattern of the area is dendritic to sub-dendritic in nature. During monsoon, the rain water is drained through the natural valleys on the SW slope.

(i)Afforestation:

It is proposed to plant about 600 plants for this review of mining plan period in 0.763Ha area in safety zone and waste dump.

Table No.34. The plantation for the review of mining plan period is given in the following table:

Period	Within Lease area in Ha.	Proposed Plantation	Location
Review of Mining Plan Period (2017-18 to 2021-22)	0.763	600	Safety Zone and Unused area & waste dumps slopes

j) Ecological and environmental improvement measures:

1. The dumps will be stabilized and afforested, after reach maximum height.
2. Retaining wall of about 45m of length is proposed to construct around the temporary dump.
3. Garland drain of about 47m of length is proposed to make around the temporary dump.

Table No.35. The environmental protective measures for the balance plan period .

Year	Retaining Wall (at the end of the proposed year)	Garland Drain (at the end of the proposed year)	Location
	Dimension (L X W X H)	Dimension (L x W x H)	
2017-18	16*1.0*1.0	17*1.0*1.0	Dump toe
2018-19	19*1.0*1.0	20*1.0*1.0	Dump toe
2019-20	22*1.0*1.0	23*1.0*1.0	Dump toe
2020-21	36*1.0*1.0	39*1.0*1.0	Dump toe
2021-22	45*1.0*1.0	47*1.0*1.0	Dump toe

Table No.36. The land use details as on date, review of mining plan period and upto conceptual period is given below, and the same is shown in Conceptual Plan (Ref: Plate No.8)

LAND USE IN HECTARES				
Sl.No.	Particulars	Present Land Use	Proposed Plan Period (2016-17 to 2020-21)	Conceptual Plan Period (2022-23)
1	Area under mining	2.33	2.83	3.076
2	Storage for top soil	0.00	0.009	0.009
3	Waste dump site	0.00	0.02	0.02
4	Mineral storage	0.00	0.00	0.00
5	Infrastructure (Workshop Admn. Bldg.)	0.02	0.02	0.02
6	Roads	0.05	0.06	0.06
7	Railways	0.00	0.00	0.00
8	Tailing Pond	0.00	0.00	0.00
9	Effluent treatment plant	0.00	0.00	0.00
10	Crushing & screening plant	0.10	0.10	0.10
11	Township area	0.00	0.00	0.00
12	**Others**			
	Green belt	0.08	**0.763**	**0.763**
	For Future use	1.468	0.246	
Total		**4.048**	**4.048**	**4.048**

B. UNDERGROUND MINING: Not Applicable.

3. MINE DRAINAGE

a) Minimum and maximum depth of water table based on observations from nearby wells and water bodies.

The ground water is much below the level of mining activity. As observed in the bore wells of nearby place in villages, water table in the area is at a depth of about 90m below the ground level.

b) Indicate maximum and minimum depth of Workings.

The mining operations may reach upto maximum depth of about 24m during proposed review of mining plan period. The minimum RL of the bench is 261m and maximum RL of benches is 237m with respect to MSL.

c) Quantity and quality of water likely to be encountered, the pumping arrangements and places where the mine water is finally proposed to be discharged.

The water table is about ~~60~~ 55m below from the working area. Hence, the encountering of water table is not there in the present review of mining plan period and also during the life of the mining period.

d) Describe regional and local drainage pattern. Also, indicate annual rain fall, catchments area, and likely quantity of rain water to flow through the lease area, arrangement for arresting solid wash off etc.

The lease area is small and the elevation of it varies from 262m to 260m RL. The slopes are fairly steep and naturally no rain water accumulates in the lease area. Hence, the drainage pattern is sub-dendritic in nature. However, the rainwater falling over the lease area flows, down the slopes through the seasonal water courses.

4.0 STACKING OF MINERAL REJECT /SUB GRADE MATERIAL AND DISPOSAL OF WASTE

a) Indicate briefly the nature and Quantity of top soil, overburden/waste and Mineral reject to be disposed off

i. Top soil:

The top soil is fine to small coarse grained, which are **0 to 0.5m** thickness from the general surface, the same will be collected wherever mining operation is conducted in the lease area. During the review of mining plan period **2,576Cu.M** of top soil is generated. The generated soil will be stored at topsoil storage temporarily within the lease area and it will be used for plantation work on the safety zone & side by land.

ii. Overburden Disposal practice:

The over burden/waste from the mine is transported to dumping site through tippers/trucks. An excavator will be deployed at the temporary dump to level the dumped material and spread it laterally in the ear marked area. The method of dumping is adopted as retreating method. While building up of dumps proper grading, terracing and garland drains will be made. It will be ensured that the height of the dump will not exceed 10m at each stage.

The dump slopes will be protected from any environmental damages by providing all the protective measures as described in detail below. Water will be sprinkled over the dumps to avoid airborne dust particles during dumping operations. The engineering measures for dump management are construction of retaining walls, garland drains will be implemented.

The main objective of these engineering structures is mainly to prevent any wash off of the dumped material outside the lease area and to prevent subsidence or slump of waste material disposed in the dump and also to prevent gully and rill formation.

During the review of mining plan period 1,361Cu.M of Intercalated waste is produced by the production 66,667Cu.M of Limestone per year. The year-wise waste is dumped in the proposed area within the mining lease. During the review

* The proposed site for waste dumping is a temporary phenomenon, wherein this waste shall be used for ramp/road formations in the succeeding year. The top-soil shall be concurrently used for afforestation purposes.

For this mine, the reports indicate that after the [illegible] of the review of mining plan period the quantity of waste including top soil to be handled is 9,381Cu.M. The year-wise generated intercalated waste and soil will be dumped in a re-handled dump and top soil storage respectively as shown in the year-wise production and development plan which is enclosed as Plate No.6A to 6E.

Table No.37. The year-wise proposed dump area details

Year	Dump No	Nature of Dump i.e. OB	Area at the beginning of the year	Additional area during the year	Area Rehabilitated during the year	Balance area at the end of the year
2017-18	--	Temporary	0.00	0.004	--	0.004
2018-19	1	Temporary	0.004	0.004	--	0.008
2019-20	1	Temporary	0.008	0.004	--	0.012
2020-21	1	Temporary	0.012	0.004	--	0.016
2021-22	1	Temporary	0.016	0.004	--	0.020

The year-wise dumping proposals are shown in the Year-wise Production & development Plan is enclosed as Plate No.6A to 6E. The Effective Dump Management Plan will be carried out by continuing current practices of terracing, construction of toe walls, garland drains along with afforestation on the dump slopes as well as on top surface of the dumps. The engineering measures for dump management will be followed. The objectives of these engineering structures are mainly to prevent any wash off into the surrounding areas outside the mining lease and to prevent subsidence/sliding of waste material into the surrounding area.

The Engineering Measures suggested by the ICFRE includes construction of check dams, retaining walls, gulley checks, garland drains, covering /spreading grasses/seeds on the dump slopes will be done as per the schedule of the ICFRE.

b) The proposed dumping ground within the lease area be proved for presence or absence of mineral and be outside the UPL unless simultaneous backfilling is proposed or purely temporary dumping for a short period is proposed in mineralized area with technical constraints & justification.

The proposed dump is temporary dump. The waste quantity will be utilized for road development purposes.

c) Attach a note indicating the manner of disposal of waste, configuration and sequence of year wise buildup of dumps along with the proposals for protective measures.

The proposed dump is a temporary dump. The method of dumping will be retreating method while building-up; dumps are properly graded and terraced. Terracing is subsequently accompanied by afforestation for stabilization of terraced slopes. The bottom of the dump will be provided with retaining wall of 45m length and water garland drain of 47m for temporary dump. The dump slopes will be suitably protected from any environmental damages, by providing all the protective measures. The year-wise build-up of dump is marked on year-wise production and development plan which is enclosed as **Plate No.6A to 6E.**

Proposals of Protective measures

Table No.38. The details proposed of protective measures for review of mining plan period

Year	Retaining Wall (at the end of the proposed year)	Garland Drain (at the end of the proposed year)	Location
	Dimension (L X W X H)	Dimension (L x W x H)	
2017-18	16*1.0*1.0	17*1.0*1.0	toe of the Dump
2018-19	19*1.0*1.0	20*1.0*1.0	toe of the Dump
2019-20	22*1.0*1.0	23*1.0*1.0	toe of the Dump
2020-21	36*1.0*1.0	39*1.0*1.0	toe of the Dump
2021-22	45*1.0*1.0	47*1.0*1.0	toe of the Dump

5.0 USE OF MINERAL AND MINERAL REJECT

The following are to be furnished in the interest of mineral conservation.

a) Describe briefly the requirement of end-use industry specifically in terms of physical and chemical composition.

The Limestone produced from this area will be sold to Cement & Steel Industries. The range of physical and chemical specifications of limestone supplied locally is furnished in the below table:

Table No.39. Some of the buyer's typical specifications are as given below:

Name of the Industry	Size of the ore	Chemical composition
Steel plants	+10 mm to -40mm	Cao+35%, MgO+3%, SiO_2 <8%
Cement Plant	0 -200 mm	Cao+35%, SiO_2 <15%

b) Give brief requirement of intermediate industries involved in up gradation of mineral before its end-use.

The mining is having all saleable material +35% CaO. Sub-grade generation is not there in this mine. All production is saleable except 2% intercalated waste.

c) Give detail requirements for industries, captive consumption, export, associated industrial use etc.

Not Applicable.

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d) Indicate precise physical and chemical specification stipulated by buyers

The threshold limit of IBM for Limestone is Cao +35%. The Limestone produced from this area will be sold to Cement & Steel Industries. The range of physical and chemical specifications of limestone supplied locally is furnished in the above **(Table No.39)**.

e) Give details of processes adopted to upgrade the ROM to suit the user requirements. The useable mineral recovered from ROM may not be directly used in any industry and may need intermediate process to suit the user industry in terms of physical and chemical compositions.

The ROM will be subjected to crushing and screening plant to meet the requirement of the end users. The flow sheet of crushing and screening plant is enclosed in the **Annexure-XIV.**

6.0 PROCESSING OF ROM AND MINERAL REJECT

a) If processing/beneficiation of the ROM or Mineral Reject is planned to be conducted, briefly describe nature of processing / beneficiation. This may indicate size and grade of feed material and concentrate, recovery etc.

No mineral processing technique will be adopted. However, dry crushing and screening of ROM will be done at the plant as per the buyer's specification with the help of 1 fixed crushing & screening plants of 15 TPH. The jaw crusher is having a size of 75 x 40mm and 50 x 30mm size in two stages. The primary material is passed from grizzly, there the -40mm material will pass directly without subjecting to crushing. The +40mm material will pass through jaw crusher. The finished product of 40-10mm material will be separated by screening to one bunker and 10-20mm material will be separated by screening to another bunker. The process flow chart of screening plant is enclosed as **Annexure–XIV.**

b) Give a material balance chart with a flow sheet or schematic diagram of the processing procedure indicating feed, product, recovery, and its grade at each stage of processing.

Furnished in Para 6.0. (a).

c) Explain the disposal method for tailings or reject from the processing plant.

No tailings will be produced in the crushing and screening process.

d) Quantity and quality of tailings /reject proposed to be disposed, size and capacity of tailing pond, toxic effect of such tailings, if any, with process adopted to neutralize any such effect before their disposal and dealing of excess water from the tailings dam.

Not Applicable.

e) Specify quantity and type of chemicals if any to be used in the processing plant.

Not Applicable.

f)Specify quantity and type of chemicals to be stored on site / plant.

Not Applicable.

g) Indicate quantity of water required for mining and processing and sources of supply of water, disposal of water and extent of recycling. Water balance chart may be given.

Water source in the area are ground water. Water is being used only for sprinkling on haul roads, dust suppression purposes at Crushing/Screening Plant, Loading, afforestation purposes and domestic use like washing, drinking, etc.

5KLD water is required for the plantation, dust suppression and domestic purpose.

7.0 OTHER

a) Site Services

Repairs of equipment's will be undertaken at mine or at Kolimigundla. it is about 1.80Km. Office, Stores, First-aid station shall be constructed and maintained at the mines.

b) Employment Potential:

Table No.40. Details of Man Power

Sl. No.	Category of persons	Number
1	Mines Manager cum Engineer	1
2	Geologist	1
3	Skilled labours	2
4	Semi-Skilled Labours	2
5	Unskilled	23
Total		**29**

8.0 PROGRESSIVE MINE CLOSURE PLAN UNDER RULE 23(B) (3) OF MCDR, 1988

8.1 Environment Base line information: Attach a note on the status of baseline information with regard to the following. Existing land use pattern indicating the area already degraded due to mining, roads, processing plant, workshop, township etc. in a tabular form.

The bellum caves are situated 4.2 Km away from the mine, the mining operations are limited and the blasting will be undertaken by controlled blasting, so there is no effect for the caves and the surrounding village habitation which is 1.8Km nearer of Kolimigundla.

Table No.41. The details of present land use:

LAND USE IN HECTARES		
Sl.No.	**Particulars**	**Area put on use at start of Plan (Present Land Use)**
1	Area Excavated	2.33
2	Storage for top soil	0.00
3	Overburden dumps	0.00
4	Mineral storage	0.00
5	Infrastructure (Workshop Admn. Bldg.)	0.02
6	Roads	0.05
7	Railways	0.00
8	Tailing Pond	0.00
9	Effluent treatment plant	0.00
10	Crushing & screening plant	0.10
11	Township area existing	0.00
12	**Others**	
	Green belt	0.08
	For Future use	1.468
Total		**4.048**

Water regime

There is no perennial water course or water body either in the mine lease area or in the buffer zone. The seasonal streams originating from the mine lease area forms the major drainage during the rainy season. Limestone being an inert material, does not contribute any hazardous ingredient to water excepting increase in some turbidity due to suspended solid particles.

Quality of air

It was expected that the quality of air likely to be deteriorate due to drilling, blasting, loading and unloading. The SPM level and the pollutants like SO_2, NOx &

CO etc. were likely to increase at work spot. The air quality is well within the permissible limit.

However, there is no major effect of mining as the mining was being operated and no villages are situated within the radius of about 1.0 km.

Ambient noise level

The noise created due to drilling, blasting, equipments, movements of the vehicle and human activities. However, as the operations are of intermittent nature and no person are exposed to continuous sound level for long period. The drilling & blasting is only rare cases. The noise level is within the permissible limit.

Since the villages are situated at a distance of more than 1.0km from the activity zone, there is no impact seen on the villages in the buffer zone. In buffer and core zone the noise level is well within prescribed limit of 70dBA.

Flora

Core zone:

The natural plantation in this area is only small bushes with thorny type. Some foxes are reported to roam in the vicinity during night times.

Buffer zone:

In the study area, the flora is observed is as follows.

Bevu, Alale, Devadari, Hunse, Mathi, Save, Thangadi, Saguwani, Neem, Subabool, Baboll (Thorny) keeper, Tamarind, Bawne, Honge etc. no floral species which are uncommon rare or medicinal value have been observed

Fauna:

The area is not a significant faunal habitant. No endangered or endemic species are found.

Climatic Conditions

Kurnool district generally has dry climate. The average rainfall in this region is about 400-450mm annually. In the semi-arid region where climate is characterized by hot and humid summer, moderate monsoon and mild winter season.

Summer is typically from March to June, when temperature ranges from a maximum of 47^{0}C during day time to a minimum of 27^{0}C at night. Winter from December to February. The rainfall does not disturb the mining activities. Moderate wind velocity prevailed in North East –South West direction.

Human settlements

There is no habitation in the lease area. No villages are situated within the lease area. The workmen and staff will come from the villages outside the leasehold. The nearest habitation is Kolimigundla Village is 1.68Km.

Public buildings, places of worship and monuments

No public buildings, PWD roads etc., no places of worship exist within the leasehold. However local temples/places of worship are located in the buffer zone villages.

Indicate any sanctuary is located in the vicinity of leasehold

No sanctuary is located in the vicinity and also in buffer zone of the lease area.

8.2 Impact Assessment: Attach an Environmental Impact Assessment Statement describing the impact of mining and beneficiation on environment on the following:

i) Land area indicating the area likely to be degraded due to quarrying, dumping, roads, workshop, processing plant, tailing pond/dam, township etc.

Table No.42. The details of present land use and proposed land of plan period

LAND USE IN HECTARES				
SL.No.	**Particulars**	**Area put on use at start of Plan (Present Land Use)**	**Additional requirement During Plan Period**	**Total**
1	Area Excavated	2.33	0.50	2.83
2	Storage for top soil	0.00	0.009	0.009
3	Overburden dumps	0.00	0.02	0.02
4	Mineral storage	0.00	0.00	0.00
5	Infrastructure (Workshop Admn. Bldg.)	0.02	0.00	0.02
6	Roads	0.05	0.01	0.06
7	Railways	0.00	0.00	0.00
8	Tailing Pond	0.00	0.00	0.00
9	Effluent treatment plant	0.00	0.00	0.00
10	Crushing & screening plant	0.10	0.00	0.10
11	Township area existing	0.00	0.00	0.00
12	**Others**			
	Green belt	0.08	0.683	0.763
	For Future use	--	--	0.246
Total		2.58	1.222	4.048

ii) Air Quality

In this area mining operations, such as drilling, blasting, excavation, loading and unloading, movement of tippers on haul roads, crushing and screening plant are expected to generate air-borne fugitive dusts. The fugitive dust released may cause

immediate effect on the mine workers, who are directly expose to the fugitive dust. Smaller size dust particles (<2µm) may be transported longer distances by wind and may cause impact on the people residing nearby villages. To avoid fugitive dust water spraying, dust control measures and green belt development will be under taken.

Air quality monitoring:

Ambient air quality shall be monitored at the following 5 stations as per DOE norms.

Table No.43. Air Monitoring Stations

Sl.No.	Village	Location	Code
1	Mine Location	Core	A1
2	Mirjapuram Village	Buffer	A2
3	Kolimigundla Village		A3
4	Itikyala Village		A4
5	Kalavadla Village		A5

These air samples shall be analyzed for SPM, RPM, SO_2 and NO_x.

iii) Water quality

There are no toxic or poisonous discharges into the drains while mining operations. So, quality of water will not be affected. But in the surface water quality might slightly be affected only during monsoon due to dump run-off. However effective control measures such as systematic dumping followed by erection of toe protection barrier. The ground water will not be affected, as the elevation of working is much above the water table level.

Monitoring of water quality:

Water samples will be collected from 4 buffer zone location and one at core location, once in a month the quality will be determined and compared with the permissible limits as stipulated by IS: 10500. The following parameters will be monitored

Table No.44. Water Parameters

1.	Color	12.	Nitrate as NO3 (mg/l)
2.	Turbidity	13.	Sulphate as SO4 (mg/l)
3.	Total Dissolved solids (mg/l)	14.	Iron as Fe (mg/l)
4.	Total suspended solids (mg/l)	15.	Calcium as Ca (mg/l)
5.	pH	16.	Magnesium as Mg (mg/l)
6.	Ambient Temperature	17.	Acidity as CaCo3 (mg/l)
7.	B.O.D (3 days at 27°C (mg/l)	18.	Alkalinity as CaCo3 (mg/l)
8.	C.O.D (mg/l)	19.	Sodium as Na (mg/l)
9.	Chloride as Cl (mg/l)	20.	Potassium as K (mg/l)
10.	Fluoride as F (mg/l)	21.	Total Hardness as CaCo3 (mg/l)
11.	Dissolved Phosphate as PO4 (mg/l)	22.	Total coliform count MPN Coli/100 ml)

Water quality shall be monitored at the following 5 stations as per DOE norms.

Table No.45. Water Monitoring Stations

Sl.No.	Village	Location	Code
1	Mine Location	Core	W1
2	Mirjapuram Village	Buffer	W2
3	Kolimigundla Village		W3
4	Itikyala Village		
5	Kalavadla Village		

Monitoring the micro-meteorological data:

Recording temperature, rainfall, humidity, wind direction and speed shall be made during the period of air monitoring.

iv) Noise levels:

Apart from drilling and transportation, operations of machines are also proposed. Therefore, the background noise levels will be slightly high. The area is away from roads where frequent traffic is encountered. Hence, the impact due to noise levels will be negligible.

Noise level monitoring:

The monitoring of sound levels will be undertaken at the following locations.

Table No.46. Noise Monitoring Stations

Sl.No.	Village	Location	Code
1	Mine Location	Core	N1
2	Mirjapuram Village	Buffer	N2
3	Kolimigundla Village		N3
4	Itikyala Village		N4
5	Kalavadla Village		N5

The noise level monitoring will be done in one season, namely for winter season.

The Environmental Monitoring Report is enclosed as **Annexure-XV**.

v) Vibration levels

Blasting is an important and vital aspect of mining. It is essential to assess the impact of this activity on the surrounding area, especially on the near-by structures and dwelling houses. The quantity of charge used in the mine at any point is very less. In the lease area there is no important structures, except like rest shelter, canteen, mines office. However, the ground vibration study will be conducted periodically and recorded in the bound paged book.

Further, the area is located at 1.68km away from the mine. The vibrations will not propagate upto the village. Hence, the impact due to blasting is negligible. However, control blasting will be adopted to control the vibrations and sound.

vi) Water regime

In this case the surface water is the rain water. The chemical analysis of Limestone does not show any hazardous parameters. Hence, the rain water passing through the mine workings does not affect.

However, during monsoon there is every possibility of transportation of the silt and sedimentation into the surrounding area, which may cause pollution to the natural drainage system.

During mining activity, a part of the dust generated by the vehicular movement get mixed with the rain water and carried as solid suspension along with it, causing siltation in the seasonal nallahs. The ground water table is about 60m below the general ground level. Hence, the ground water will not be affected.

vii) Acid mine drainage

Not Applicable.

viii) Surface subsidence:

Not Applicable.

ix) Socio-economics:

There are 5 villages are falling within the buffer zone (5Km). They all depend upon agriculture activity mainly and mining related activities. The proposed mining operations in the locality will improve the living standards of the local people i.e. mining operations will boost the employment opportunities of the area. Hence, the

beneficial effect on the economy of the inhabitants of the nearby villages, by the mining operations is very significant.

Regarding safety, mine management will take all precautionary measures such as providing Personal Protective Equipment (PPE) such as goggles, respirators, earmuffs, safety belts and ropes, helmets and safety shoes etc. In addition to this, the mine will be provided with first aid station etc. Due to the proposed production, the Government will also be benefited financially through revenues amounting to lakhs of rupees by way of royalty, sales taxes, road tax etc.

x) Historical monuments etc.

There are no historical monuments situated within or outside the 10km radius from the lease area. However the balun caves are situated 4.2 Km away from the mine.

8.3 Progressive Reclamation Plan: To mitigate the impacts and, describe year wise steps proposed for phased restoration, reclamation of lands already/to be degraded in respect of following items separately for 5 years period.

The Toe wall and Garland drain proposed construction details around the proposed re-handled dump.

Table No.47. The details proposed of protective measures for review of mining plan period

Year	Retaining Wall (at the end of the proposed year)	Garland Drain (at the end of the proposed year)	Location
	Dimension (L X W X H)	Dimension (L x W x H)	
2017-18	16*1.0*1.0	17*1.0*1.0	Toe o the dump
2018-19	19*1.0*1.0	20*1.0*1.0	Toe o the dump
2019-20	22*1.0*1.0	23*1.0*1.0	Toe o the dump
2020-21	36*1.0*1.0	39*1.0*1.0	Toe o the dump
2021-22	45*1.0*1.0	47*1.0*1.0	Toe o the dump

The lessee will carry out environmental monitoring as per approved EIA/EMP by MoEF and implementing the quality parameters. The lessee will supervise all environmental related works.

8.3.1. Mined-Out Land: Describe the proposals to be implemented for reclamation and rehabilitation of mined-out land including the manner in which the actual site of the pit will be restored for future use. The proposals may be supported with yearly plans and sections depicting yearly progress in the activities for land restoration/ reclamation/rehabilitation, afforestation etc., called "Reclamation Plan".

At present reclamation proposals in the present review of mining plan period is not there. In the conceptual plan period the pit will be allowed for rain water harvesting. As the area is scarce of water sources the water harvesting will help in ground water charge.

Table No.48. The details of proposed mining area in the review of mining plan period

Year	Mined out area at the beginning in Ha	Additional area proposed during the year in Ha	Total Area in Ha	Area Reclaimed & Rehabilitated during the year in Ha	Mined out area at the end of the year in Ha	Remarks
2017-18	2.33	0.10	2.43	0.00	2.43	Some part of the area falls in Pit-1
2018-19	2.43	0.10	2.53	0.00	2.53	
2019-20	2.53	0.10	2.63	0.00	2.63	
2020-21	2.63	0.10	2.73	0.00	2.73	
2021-22	2.73	0.10	2.83	0.00	2.83	
Total		0.50	--	0.00	2.83	

8.3.2 Topsoil Management:

The top soil is fine to small coarse grained, which are **0 to 0.5m** thickness from the general surface, the same will be collected wherever mining operation is conducted in the lease area. During the review of mining plan period **2,576**Cu.M of top soil is generated. The generated soil will be used for plantation work on the safety zone & side by land.

Table No.49. The details of year-wise top-soil generation

Year	Top Soil in m³
2017-18	--
2018-19	249
2019-20	287
2020-21	1,871
2021-22	169
Total	**2,576**

8.3.3 Tailings Dam Management: Not Applicable.

8.3.4 Acid mine drainage, if any and its Mitigative measures. Not Applicable.

8.3.5 Surface subsidence mitigation measures through backfilling of mine voids or by any other means and its monitoring mechanism.

The information on protective measures for reclamation and rehabilitation works year wise may be provided as per the following table.

The details proposed of protective measures for review of mining plan period

Year	Retaining Wall (at the end of the proposed year)	Garland Drain (at the end of the proposed year)	Location
	Dimension (L X W X H)	Dimension (L x W x H)	
2017-18	16*1.0*1.0	17*1.0*1.0	Toe o the dump
2018-19	19*1.0*1.0	20*1.0*1.0	Toe o the dump
2019-20	22*1.0*1.0	23*1.0*1.0	Toe o the dump
2020-21	36*1.0*1.0	39*1.0*1.0	Toe o the dump
2021-22	45*1.0*1.0	47*1.0*1.0	Toe o the dump

The plantation for the review of mining plan period is given in the following table:

Period	Within Lease area in Ha.	Proposed Plantation	Location
Review of Mining Plan Period (2017-18 to 2021-22)	0.763	600	Safety Zone and Unused area & waste dumps slope

Table No.50. SUMMARY OF YEARWISE PROPOSAL FOR ITEM NO.8.3

Items	Details	Proposed	Actual	Remarks
Dump management	Area afforested (ha)	--	--	-----
	No of saplings planted	--	--	
	Cumulative no of plants	--	--	
	Cost including watch and care during the year	--	--	
Management of worked out benches	Area available for rehabilitation (ha)	--	--	The worked-out area is still having mineralization. It will be active in the present review of mining plan period.
	Afforestation done(ha)	--	--	
	No of saplings planted in the year	--	--	
	Cumulative no of plants	--	--	
	Any other method of rehabilitation (specify)	--	--	
	Cost including watch and care during the year	--	--	
Reclamation and Rehabilitation by backfilling	Void available for Backfilling (L X B X D) pit wise /stope wise	--	--	The mined-out area will be utilized for rain water harvesting during this conceptual period
	Void filled by waste /tailings	--	--	
	Afforestation on the backfilled area	--	--	
	Rehabilitation by making water reservoir	--	--	
	Any other means (specify)	--	--	
Rehabilitation of waste land within lease	Area available (ha)	--	--	There is no waste land within the lease area.
	Area rehabilitated	--	--	
	Method of rehabilitation	--	--	
Others(specify)	----			---

8.4 Disaster Management and Risk Assessment:

An important element of mitigation is emergency planning i.e., recognizing accidents that are possible, assessing the consequences of such possible accidents and deciding on the emergency procedures, in advance, both on-site and off-site,

that would need to be implemented in the event of an emergency, systematically and without delays and confusion.

Maintenance of proper bench geometry, observing safety precautions for transport, proper storage, safe handling and use of explosives and fuel etc. good maintenance of roads and transport units, fire prevention measures, good dump management, shall go a long way in preventing accidents/disasters.

The mining will be carried-out strictly as per MMR, 1961 and all other rules and regulations. Project proponent is having mobile communication system for quick passing of information if need arises. Proper training will also be given to the work persons periodically at group V.T. Center, as per DGMS rules.

The management is committed to identify possible causes for the potential disasters and draw a code of emergency measures and procedures to deal with such disasters, which is otherwise also advised by DGMS through their periodic circulars. The mine is having good communication system like wireless & telephone facility. In case of any minor/major accidents within the mine, the same will be communicated to Mines Manager for action.

At mine level first aid will be provided and person(s) shall be shifted to nearby hospital at Yadiki which Mandal is having all basic amenities Hospitals, Post & Telegraph etc., which is at a distance of 25km from the mine.

Injured person(s) will be shifted to the hospital by departmental vehicle. The financial allocation for the above jobs will be about 3.5lakhs/annum. However, it will be reviewed periodically. The following person is responsible for the disaster management and he needs to be contacted in the below mentioned address in case of any disaster.

i) Duty of any person:

Any person, realizing that anything serious has happened anywhere belowground, shall immediately inform the nearest mining official.

ii) Duty of Mining Official/ Foreman:

Any official, on being informed that a disaster has occurred shall immediately:-

a) Verify the veracity of information,

iii) Duty of Attendance Clerk:

On receiving the information of a disaster, he shall immediately

a) Sound a hooter or siren, declaring a state of emergency, send information by all members of the consultative committee available at the mine; and then all key personnel at the mine;

b) Prepare a statement, showing number and names of persons in different parts of the mine, and send a copy to the operations control room.

iv) Duty of Telephone Operator/Attendant:

On hearing of a disaster from the mine or by emergency hooter, he shall: -

a) Establish the contacts from the mine and collect the details

b) Send the information, over telephone, to the following in order of priority:

All members of the standing consultative committee, key personnel stationed at the mine, managers of adjoining mines

v) Duty of Store keeper:

On hearing the emergency siren, he shall immediately: -

a) Proceed to the stores,

b) Check the materials according to the emergency list,

c) Arrange for procuring additional materials from central stores/other mines, in consultation with the other mine, in consultation with the control room

vi) Duty of Managers of Adjoining Mines:

The manager of adjoining mines shall immediately:

a) Alert key personnel likely to be required and

b) Proceed to the operations control room

In case of an apprehended danger to their own mine, however, they shall activate their own emergency organization.

vii) Duty of transport Officer:

He shall report to the operations control room

a) Check on calling out the Rescue Team and First aid men,

Table No.32: Emergency Details

Fire Station	:	Kolimigundla	101
Health Center	:	Kolimigundla	108
Hospital	:	Kolimigundla	106
Police Station	:	Kolimigundla	08510-244333,100

8.5 Care and maintenance during temporary discontinuance:

An emergency plan to deal with the situation of temporary discontinuance or incomplete programme due to Court order/due to statutory requirements or any other unforeseen circumstances will be drawn by the technical & managerial personnel to suit the specific situation of this mine. This will be reviewed & modified to suit changing conditions and needs. This would take care of preventing of access to dangerous places, pits and preventing accident fall into the pit of animals & men. Security will also look into the safety measures placed at various places like firefighting equipment, switch gear etc.

The following specific measures are taken

(i) Proper and adequate security at the entrance/exit to the mine to prevent entry of unauthorized person with proper gates under lock.

(ii) Top edges of the quarry will be fenced-off with approved type of fencing.

(iii) Entrance to the toe of dumps will be blocked.

(iv) Special security and fire preventing measures will be taken at dangerous places/explosive magazine etc.,

(v) All the above will be examined by mines manager once in a week to ensure that they are in order.

8.6 Financial Assurance:

The financial assurance can be submitted in any encashable form preferably a Bank Guarantee from a Scheduled Bank as stated in Rule 23(F)(2) of Mineral Conservation.

The Financial Assurance is calculated till plan period and the details of land use considered are shown in a prescribed format issued by IBM as per the Circular No. 4/2006 and the same is furnished below

b) Obtain list of men in the pit from the attendance clerk, and give copies to the officer incharge of the Control Room.

viii) Duty of Engineer:

The engineer shall: -

a) Report the control room,

b) Contact the store keeper,

c) Send messengers from the mine to call such workmen and mechanics as are required.

ix) Duty of Doctor:

He shall

a) Report to the control room,

b) Proceed to the mine forthwith, taking such instruments and drugs as are likely to be useful,

x) Duty of welfare officer:

He will report the control room and assist in the preparation of the following accommodation.

a) Stretcher casualty station,

b) Sleeping accommodation

c) Get a copy of the list of men in the pit from the clerk and make the arrangement of food for all members involving in the rescue and the victims.

xi) Duty of Security Staff:

They are to control the roads and keep them clear for ambulance and other motor vehicles.

Table No.51. The address & contact details

Name of the person responsible	Lessee
Address	M/s. Sainath Minerals, Proprietor Sri. P. Bayapu Reddy, Kolimigundla Village & Mandal, Kurnool District, Andhra Pradesh
E-mail Address:	pbrssminerals@gmail.com
Phone No.	+91 9440008718

In case of emergency regarding fire, Hospital, Police stations have to be intimate the following places.

Table No.53. The detailed breakup of the area for financial guarantee

Sl.No.	Head	Area Put on use at start of Review of Mining Plan (Ha)	Additional requirement during plan period (Ha)	Total Area (Ha)	Area considered as fully reclaimed and rehabilitated (Ha)	Net area considered for calculation (Ha)
1	Area Excavated	2.33	0.50	2.83	--	2.83
2	Storage for top soil	0.00	0.009	0.009	--	0.009
3	Overburden dumps	0.00	0.02	0.02	--	0.02
4	Mineral storage	0.00	0.00	0.00	--	0.00
5	Infrastructure (Workshop Admn. Bldg.)	0.02	0.00	0.02	--	0.02
6	Roads	0.05	0.01	0.06	--	0.06
7	Railways	0.00	0.00	0.00	--	0.00
8	Tailing Pond	0.00	0.00	0.00	--	0.00
9	Effluent treatment plant	0.00	0.00	0.00	--	0.00
10	Crushing & screening plant	0.10	0.00	0.10	--	0.10
11	Township area existing	0.00	0.00	0.00	--	0.00
12	Others					
	Green Belt	0.08	0.683	0.763	--	0.763
	For Future use	--	--	0.246	--	0.246
Grand Total		**2.58**	**1.222**	**4.048**	**--**	**4.048**

The Financial Assurance has been calculated and submitted to the authorities for the area used for mining and allied activities in the plan period is 4.048Ha. At specified rate of Rs. 25,000/- per Ha. The financial assurance is Rs. 101,200/- . As per the minimum financial assurance amount of Rs. 200,000/- is submitting along with the document and the copy is enclosed in the **Annexure XVIII**.

This mining plan is approved subject to the conditions, stipulations indicated in the mining plan approval letter No. AP/KNL/MP/LST-78/2470 dt. 15-12-16

For M/s. Sri Sainath Minerals

P. Bayapu Reddy

K. Prabhakara Reddy
B.E (Mining), Surveyor, FCC (UR), QP, M.Sc.
Qualified Person

Sri. P. Bayapu Reddy,
Proprietor

अनुमोदित
APPROVED
क्षेत्रीय खान नियंत्रक
Regional Controller of Mines
भारतीय खान ब्यूरो
Indian Bureau of Mines
हैदराबाद/Hyderabad

भारत सरकार - भारतीय खान ब्यूरो
GOVT OF INDIA-INDIAN BUREAU OF MINES

PART-B

CERTIFICATE FROM RQP

The provisions of the **Mineral Conservation and Development Rules, 1988** have been observed in the preparation of the Review of Mining Plan for **Kolimigundla Limestone Mine** over an area of **4.048Ha**, of **M/s. Sri Sainath Minerals, Kolimigundla** Village & Mandal & **Kurnool** District of **Andhra Pradesh** State and whenever specific permissions are required, the applicant will approach the concerned authorities of **Indian Bureau of Mines**.

The information furnished in the Review of Mining Plan is true and correct to the best of our knowledge.

Place: Hosapete
Date: 07.12.2016

K. PRABHAKARA REDDY
Qualified Peron

भारत सरकार - भारतीय खान ब्यूरो
INDIAN BUREAU OF MINES

UNDERTAKING

01 The Review of Mining Plan in respect of Kolimigundla Limestone Mine over an area of 4.048Ha in Kolimigundla Village & Mandal, Kurnool District, Andhra Pradesh, under Rule 17(2) of MCR, 2016 has been prepared by **Qualified Person K. Prabhakara Reddy.**

This is to request the Regional Controller of Mines, Indian Bureau of Mines, Hyderabad to make any further correspondence regarding any correction of Review of Mining Plan with the said recognized person at his address below: -

K. Prabhakara Reddy,
M/s. Sai Universal Mining Services
#Plot.No.15-DP2, KIADB, Sankalapura Industrial Area,
Near Water Tank, Ballari Main Road, HOSAPETE-583201,
Ballari District, Karnataka.

We hereby undertake that all modifications/updating as made in the said Review of Mining Plan by the said recognized person be deemed to have been made with our knowledge and consent and shall be acceptable on us and binding in all respects.

02 It is certified that the **CCOM Circular No-2/2010** will be implemented and complied with when an authorized agency is approved by the State Government.

03 It is certified that the Progressive Mine Closure Plan of Kolimigundla Limestone Mine of M/s. Sri Sainath Minerals over an area of 4.048Ha complies with all statutory rules, regulations, orders made by the Central or State Government, Statutory organization, Court etc. which have been taken into consideration and wherever any specific permission is required the lessee will approach the concerned authorities.
The information furnished in the **Progressive Mine Closure Plan** is true and correct to the best of our knowledge and records.

04 "The provisions of **Mines Act, Rules and Regulations** made there under have been observed in the Review of Mining Plan over an area of 4.048Ha in Kurnool District in Andhra Pradesh State belonging to Kolimigundla Limestone Mine and where specific permissions are required, the lessee will approach the **D.G.M.S.** Further, standards prescribed by **D.G.M.S.** in respect of **'miners' health** will be strictly implemented".

For M/s. Sri Sainath Minerals

P. Bayapu Reddy

P. Bayapu Reddy
Proprietor

Place: Kolimigundla
Date: 07.12.2016

ANNEXURES

LIST OF ANNEXURE

SL.No.	Description	Annexure No.
1	The copy of the lease deed	I
2	Retaining Letter the remaining area of the lease Proceeding letter	II
3	Transfer of Mining lease (Form-O)	III
4	Approved Modification Mining Plan Letter	IV
5	Photographs of boundary pillars & mines	V
6	Copy of registration of the company	VI
7	ID & Address proof of the lessee	VII
8	Qualification & Experience certificate of QP	VIII
9	Chemical Analysis Report of Working Pit	IX
10	Lithologs of Working Pit	IXA
11	Intimation Letter (Form-J)	X
12	Lithologs of Core & DTH boreholes (Form-K)	XI
13	Chemical Analysis Report of Core & DTH boreholes	XII
14	NABL Accredited Certificate	XIII
15	Feasibility Study Report	XIIIA
16	Flow Chart of Crushing & Screening Plant	XIV
17	Environment Monitoring Report	XV
18	Explosive License	XVI
19	Blasting Agreement	XVII
20	Financial Assurance	XVIII

iv) The transferor hereby declares that he she has accepted all the conditions and liabilities which the transferor was having in respect of such mining lease.

v. The transferee further declares that he is financially capable of and will directly undertake mining operations.

vi. The transferee further declares that he has failed an affidavit stating that he has filed up to date Income Tax returns, paid the income tax assessed on him and paid the income tax on the basis of self assessment as provided in the Income Tax Act, 1961)(43 of 1961)

vii) The transferor has supplied to the transferee the original/or certified copies of all plans of abandoned workings in the area and in a belt of 65 meters wide surrounding it.

viii) The transferee hereby further declares that as a consequence of this transfer, the total area while held by him under mineral concessions are not in contravention of Section 6 of the Mines and Minerals (Regulation and Development) Act, 1957 or Rule 35 of the Mineral Concession Rules, 1960.

ix) The transferor has paid all the rent royalties and other dues towards Government till this date in respect of this lease.

In witness whereof the parties hereto have signed on the date and year first above written.

SCHEDULE - I

LOCATION AND AREA OF THE LEASE

All that tract of lands situated at Kalva Gudla ---- description of area or areas) Kalva Gudla in (paragana) in ---------------------------- the Registration District----Kurnool----sub-District -----------------------and Thana---------------------- bearing cadastral Survey Nos. 191/A1, 191/A2, 188/3, 4, 193/4, 03 containing an area of 7.875 - or there bouts delineated on the plan hereto annexed and thereon colored ------------------ and bounded as follows.

On the North by :
On the South by : } As on sketch enclosed.
On the East by :
On the West by :

Signed by C.A. Jayachandra Rao, ADMG for and on behalf of the State Government in the presence of

1.

2.

Assistant Director of Mines and Geology BANAGANAPALLE.

Signature of transferor in presence of witnesses.

1.

For : Sri Sainath Minerals

2.

Proprietor

Signature Transferee in the presence of witnesses:

For SJK Steel Plant Ltd.

1.

2.

Authorised Signature

FORM – K
Model Form Of Mining Lease
(See Rule 3)

THIS INDENTURE made this 23rd day of August 2002 between the Governor of Andhra Pradesh / The President of India (hereinafter referred to as the State Government which expression shall where the context so admits be deemed to include the successors and assigns) of the one part and

WHEN THE LESSEE IS AN INDIVIDUAL

Sri P. Bayapu Reddy Prop. M/s Saimothi Minerals Kolimigundla ...

(Name of person with address and occupation)(hereinafter referred to as "the lessee" which expression shall where the context so admits be deemed to include his respective heirs, executors, administrators, representatives and permitted assigns.)

WHEN THE LESSEES ARE MORE THAN ONE INDIVIDUAL

____

(Name of the person with address and occupation) and ________ Name of the person with address and occupation) (hereinafter referred to as the LESSEE which expression shall where the context so admits be deemed to include their respective heirs, executors, administrators, representatives and permitted assigns).

WHEN THE LESSEE IS A REGISTERED FIRM

____

(Name and address of the partner) Son of ________ of ________ of ________ all carrying on business in partnership under the firm name and style of ________ (Name of the firm) registered under the Indian Partnership of 1932 (9 of 1932) and having their registered office at ________ in the town of ________ (hereinafter referred to as "the licensee" which expression where the context so admits be deemed to include all the said partners, their respective heirs, executors, administrators, representatives and permitted assigns).

WHEN THE LESSEE IS A REGISTERED COMPANY

____

(Name of the company) a company registered under ________ (Act under which incorporation) and having its registered office at ________ (Address) (hereinafter referred to as 'the lessee' which expression shall where the context so admits be deemed to include its successors and permitted assigns) of the other part.

WHEREAS THE lessee/lessees has / have applied to the State Government in accordance with Mineral Concession Rules, 1960 (hereinafter referred to as 'the said Rules') for a Mining Lease for Limestone in respect of the lands described in Part I of the Schedule hereunder written and has / have deposited with the State Government, the sum of Rs. 10,000/- as Security and the sum of Rs.1000/- for meeting the preliminary expenses for a mining lease (and WHEREAS the Central Government has approved the grant of the lease). *(No. MII-152 (57)/61 Dt: 15-10-63).

P. Bayapu Reddy   ASST. DIRECTOR OF MINES & GEOLOGY

WITNESSETH that in consideration of the rents and royalties, covenants and agreements by and in these presents and the schedule hereunder written reserved and State Government (with the approval of the Central Government) *hereby grants and demises and to unto lessee / lessees.

All those the mines beds/veins seems of Lime Stone (here state the mineral or minerals) (hereinafter and in the schedule referred to as the said minerals) situated, lying and being in or under the lands which are referred to in Part I of the said schedules, together with the liberties, powers and privileges to be exercised or enjoyed in connection herewith which are mentioned in Part II of the said Schedule subject to the restrictions and conditions as to the exercise and enjoyment of such liberties, powers and privileges which are mentioned in Part III of the said schedule except and reserving out of this demise unto the State Government the liberties, powers and privileges mentioned in Part IV of the said schedule To Hold the premises hereby granted and demised unto the lessee / lessees from the 23rd day of August 2002 for the term of 20 years thence next ensuring yielding and paying therefore unto the State Government the several rents and royalties mentioned in Part V of the said schedule at the respective times therein specified subject to the provisions contained in Part VI of the said schedule and the lessee / lessees hereby covenant / covenants hereby covenants with the lessee/lessees as in Part VIII of the said Schedule as expressed and it is hereby mutually agreed between the parties hereto as in Part IX of the said schedule is expressed.

In witness whereof these present shave been executed in manner hereunder appearing the day and year first above written.

The Schedule above referred to :

PART - I

THE AREA OF THIS LEASE

Location and Area of the Lease :

All that tract of land situated at Kolimigundla (Description of area or areas) in (Paragana) in Kolimigundla the Registration district Kurnool Sub-district _____ and Thana _____ being Cadastral Survey Nos. 191/A, A2, 195/4A2B, 195/4A3B, 195/4A2 & A4, 188/3 containing an area of 11.933 Hec or thereabouts delineated on the plan hereto annexed and thereon coloured Red _____ and bounded as follows :-

On the North by
On the South by
On the East by
On the West by } As on sketch enclosed

Hereinafter referred to as the "said lands"

PART - II

Liberties, Powers and privileges to be exercised and enjoyed by the Lessee / Lessees subject to the restrictions and conditions in Part -- III.

LESSEE P. Bayapureddy [signature] [signature] ASST. DIRECTOR OF MINES & GEOLOGY KURNOOL.

TO ENTER UPON LAND AND SEARCH FOR WIN WORK ETC.

1. Liberty and power at all times during the term hereby demised to enter upon the said lands and to search for mine bore, dig, drill or win work dress process, convert, carry away and dispose of the said mineral / minerals.

TO SINK, DRIVE AND MAKE PITS SHAFTS AND INCLINES ETC :-

2. Liberty and power for or in connection with any of the purpose mentioned in this part to sink, drive make maintain and use in the said lands any pits shafts inclines drifts, levels water ways air-ways and other works (and to use maintain deepen or extent any existing works of the like nature in the said lands).

TO BRING TO USE MACHINERY EQUIPMENT ETC.

3. Liberty and power for or in connection with any of the purpose mentioned in this part to erect, construct, maintain and use on or under the said lands any engines. Machinery, plant dressing floors, furnaces, coke ovens, brick kilns, workshops store-houses, bunglows, godowns, sheds and other buildings and other works and conveniences of the like nature on or under the said lands.

TO MAKE ROADS AND WAYS ETC. AND USE EXISTING ROADS AND WAYS

4. Liberty and power for or in connection with any of the purposes mentioned in this part to make any tramways, railways, roads, aircraft landing grounds and other ways in or over the said lands and to use maintain and go and repass with or without horses, cattle, wagons, aircrafts, locomotives or other vehicles over the same (or any existing tramways, railways, roads and other ways in or over the said lands) on such conditions as may be agreed to.

TO GET BUILDING AND ROAD MATERIALS ETC :

5. Liberty and power for or in connection with any of the purposes mentioned in this part to quarry and get stone gravel and other building and road materials and clay and to use and employ the same and to manufacture such clay into bricks or tiles and to use such bricks or tiles but to sell any such material bricks or tiles.

TO USE WATER FROM STREAMS ETC :

6. Liberty and power for or in connection with any of the purpose mentioned in this part but subject to the right of any existing or future lessees and with the written permission of Deputy Commissioner / Collector to appropriate and use water from any streams, water-courses, springs or other sources in or upon the said lands and to divert, step up or dam any such stream or water course and collect or impound any such water and to make construct and maintain any water course, culverts drains or reservoirs but not as to deprive any cultivated lands, villages, buildings or watering places for livestock of a reasonable supply of water as before accustomed nor in any way to foul or pollute any streams or springs; provided that the lessee / lessees shall not interfere with navigation in any navigable stream nor shall divert such stream without the previous written permission of the State Government.

LESSEE P. Bangaru Reddy ASST. DIRECTOR OF MINES & GEOLOGY

TO USE LAND FOR STACKING, HEAPING, DEPOSITING PURPOSES :-

7. Liberty and power to enter upon and use a sufficient part of the surface of the such lands for the purpose of stacking, heaping, storing or depositing therein any produce of the mines or works carried on and any tools, equipment, earth and materials and substances dug or raised under the liberties and powers mentioned in this part.

BENEFACTION AND CONVEYING AWAY OF PRODUCTION :-

8. a) Liberty and power to enter upon and use a sufficient part of the said lands to beneficiate any ore produced from the said lands and to carry away such beneficiated ore.
To make coke (To be used in case of coal only)
b) Liberty and power upon the said lands to convert into coke any coal or coal dust produced from the said lands and to carry away such coke.

TO CLEAR BRUSHWOOD AND TO FELL AND UTILISE TREES, ETC :-

9. Liberty and power for or in connection with any of the purposes mentioned in this part and subject to the existing rights of other and save as provided in clause 3 of the part III of this schedule to clear under under-growth and brushwood and to fell and utilise any trees or timber standing or found on the said lands provided that the State Government may ask the lessee / lessees to pay any trees or timber felled and utilised, by him / them at the rates specified by the Deputy Commissioner/Collector or the State Government.

PART – III

Restrictions and conditions as the exercise of the Liberties, Powers and Privileges in Part II.

NO BUILDING ETC. UPON CERTAIN PLACES :-

1. No building or thing shall be erected, setup or placed no surface operations shall be carried, in or upon any public pleasure ground, burning or burial ground or place held sacred by any class of persons or any house or village site, public road or other place which the State Government may determine as public ground nor in such manner as to injure or prejudicially effect any buildings, works property or rights of other persons and no land shall be used for surface operation which is already occupied by persons other than the State Government for works or purposes not included in this lease. The lessee / lessees shall not also interfere with any right of way, well or tank.

PERMISSION FOR SURFACE OPERATIONS IN A LAND ALREADY IN USE:-

2. Before using surface operations any land which has not already been used for such operations, the lessee / lessees shall give to Deputy Commissioner / Collector of the District two calendar months previous notice in writing specifying the name or other description of the situation and the extent of the land proposed to be so used and the purpose for which the same is required and the said land shall not be so used if objection is issued by the Deputy Commissioners / Collector within two months after the receipt by him of such notice unless the objection so stated shall be reference to the State Government be annulled or waived.

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TO CUT TREES IN UNRESERVED LANDS :-

3. The Lessee / Lessees shall not without the express sanction of the Deputy Commissioner / Collector cut down or injure any timber or trees on the said lands but may without such sanction clear away any brushwood or under growth which interferes with any operations authorised by these presents. The Deputy Commissioner / Collector or the State Government may require the Lessee / Lessees to pay for any trees or timber felled and utilised by him / them at the rates specified by the Deputy Commissioner / Collector of the District.

TO ENTER UPON RESERVED FORESTS

4. Notwithstanding anything in this Schedule contained, the Lessee / Lessees shall not enter upon any reserved forest included in the said lands without previous sanction in writing of the District Forest Officer nor fell cut and use any timber or trees without obtaining the sanction in writing of that Officer nor otherwise than in accordance with such conditions as the State Government may prescribe.

NO MINING OPERATIONS WITHIN 50 METERS OF PUBLIC WORKS ETC:

5. The Lessee / Lessees shall not work or carry on or allow to be worked or carried on any Mining operations at or to any point within a distance of 50 meters from any railway line, except with the previous written permission of the Railway Administration concerned or under or beneath any ropeway or any ropeway trestle or station, except under in accordance with the written permission of the authority owning the ropeway or from any reservoir, canal or other public works such as public roads and buildings or inhabited site except with the previous written permission of the Deputy Commissioner / Collector or any Other Officer authorised by the State Government in his behalf and otherwise than in accordance with such instructions, restrictive and conditions either general, or special which may be attached to such permission. The said distance of 50 meters shall be measured in the case of railway reservoir or canal horizontally from the outer toe of the bank or the outer edge of the cutting as the case may be and in case of a building horizontally from the plinth thereof. In the case of a village roads no working shall be carried on within a distance of 10 meters of the outer edge of the cutting except with the previous permission of the Deputy Commissioner/Collector or any other office duly authorised by the State Government in these behalf and otherwise than in accordance with such directions, restrictions and additions, either general or special, which may be attached to such permission. (No. 1 (51) / 65 - MII, Dt. 26-02-69).

EXPLANATION :- For the purpose of this clause, the expression "Railway Administration" shall have the same meaning as it is defined to have in the Indian Railway Act , 1890 by clause (6) of Section 3 of that Act. 'Public Road' shall mean a road which has been constructed by artificially surfaced as distinct from a track resulting from repeated use. Village road will include any track shown in the Revenue record as village road.

FACILITIES FOR ADJOINING GOVERNMENT LICENCES AND LEASES :-

6. The Lessee / Lessees shall allow existing and future holders of Government licences or leases over any land which is comprised in or adjoins or is reached by the land which is comprised in or adjoins or is reached by the land held by the lessee/lessees reasonable facilities of access thereto :

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Provided that no substantial hindrance or interference shall be caused by such holders of licences or leases to the operating of the Lessee / Lessees under these presents and fair compensation (as may be mutually agreed upon or in the event of disagreement, as may be decided by the State Government) shall be made to the Lessee / Lessees for loss or damage sustained by the Lessee / Lessees by reason of exercise of this liberty.

PART - IV

Liberties, Power and Privileges reserved to the State Government

TO WORK OTHER MINERALS :-

1. Liberty and power for the State Government or to any lessee or persons authorised by it in that behalf to enter into a and upon the said lands and to search for, win, work, dig, get, raise, dress, process, convert and carry away minerals other than the said minerals and any other substances and for those purposes to sink, drive, make erect, construct, maintain and use such pits shafts, inclines, drifts, levels and other lines, waterways, airways, water courses, drains, reservoirs, engine, machinery, plant, building, canals, tramways, railways, roadways and other works and conveniences as may be deemed necessary or convenient.

   Provided that in the exercise of such liberty and power no substantial hindrance or interference shall be caused to or with the liberties, powers and privileges of the Lessee / Lessees under these presents and that fair compensation (as may be mutually agreed upon or in the event of disagreement as, may be, decided by the State Government) shall be made to the lessee / lessees for all loss or damage sustained by the Lessee / Lessees by reason or in consequence of the exercise of such liberty and power.

   TO MAKE RAILWAY AND ROADS :-

2. Liberty and power for the State Government or any lessee or person authorised by it in that behalf to enter into and upon the said lands and to make upon over or through the same any railways, roadways, tramways or pipes lines for any purpose other than those mentioned in Part II of the presents and to get from the said lands, stones, gravel, earth and other materials for making, maintaining and repairing such railways, tramways and roads or any existing railways and roads and to go and repass at all times with or without horses, cattle or other animals carts, wagons, carriages locomotives or other vehicles over or along any such railways, roads lines and other ways for all purposes and as occasions may require provided that in the exercise of such liberty and power by such other lessee or person no substantial hindrance or interference shall be caused to or with the liberties powers and privileges of the Lessee / Lessees under these presents and that fair compensations as may be mutually agreed upon or in the event of disagreement as may be decided by the State Government shall be made to the Lessee / Lessees for all loss or damage substantial hindrance or interference shall be caused to or with the exercise by such lessee or person of such liberty and power.

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PART - V

Rents and Royalties reserved by this lease

TO PAY DEAD RENT OR ROYALTY WHICHEVER IS HIGHER

1. The Lessee shall pay for every year, except the first year of the lease, dead rent as specified in clause 2 of this part in respect :

Provided that where the holder of such mining lease becomes liable under section 9 of the act, to pay royalty for any mineral removed or consumed by him or by his agent, manager, employee, contractor, sub-lease from the leased area, he shall be liable to pay either such royalty or the dead rent in respect of the area, whichever is higher.

RATE OF ROYALTY: PAYMENT OF DEAD RENT

2. Subject to the provisions of clause 1 of this part, during the subsistence of the lease, the lessee / lessees shall pay to the State Government annual dead rent for the lands demised and described in part I of this schedule. The rates for the times being specified in the third schedule to the Act, in such manner, as may be, specified in this behalf by the State Government (Govt. Memo.No.1997/Mi/74-1, Dated 5.6.74, published in Part I, Rules supplement to A.P. Gazette, Dated 4.7.74.

I. Rates of Royalty:

1) Lime Stone (i.e. Grade less than one and half percent Silica Content) - Fifty Rupees per Tonne

2) Others : Sixty Rupees per Tonne

II. Dead rent:

(Rates of dead rent in rupees per hectare per annum)

Category of the Mining Lease	1st year of the lease	2nd to 5th year of the lease	6th to 10th year of the lease	11th year of the lease on wards
Lease area upto 50 hectares	N IL	70	140	200

III. Surface rent and Water charges: As fixed by the Govt. from time time

The Lessee shall remit the annual dead rent in advance for each year in the first week of January into Government Treasury under the head of account _____ along with other rents viz. Surface rent and water rate assessed on the land.

RATE AND MODE OF PAYMENT OF ROYALTY

3. Subject to the provision of clause 1 of this part, the Lessee / Lessees shall during the subsistence of this lease pay to the State Government may describe royalty in respect of any mineral / minerals remised by him / them from the leased area at the rate for the time being specified in the second schedule to the Mines and Minerals (Regulation and Development) Act, 1957.

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The Lessee / Lessees shall in respect of the quantity of ore minerals intended to be transported him each time from the leased area to a place outside the said area pay the royalty on such quantity at the time of such transport to an officer designated in this behalf at the rates specified in second schedule to Mines and Minerals (Regulation and Development) Act 1957, and shall on an application made by him in this behalf in Form 'A' appended to this notification, obtain a permit from the authorised officer in Form 'B' in token of having paid the royalty.

The Lessee / Lessees shall produce the permit as obtained to the inspecting officer appointed by the Government in this behalf when required to be produced for inspection during the course of transport of ore or minerals.

The Lessee shall pay Andhra Pradesh (Mineral royalty under Section 3 of the A.P. (Miner Rights) Tax Act, 1967 at the rate of _____ of the amount payable under section of the Mines and Minerals (Regularised and Development Act, 1957.

PAYMENT OF SURFACE RENT & WATER RATE

4. The Lessee / Lessees shall pay rent and water rate to the State Government in respect of all parts of the surface of the said lands which shall from time to be occupied or used by the Lessee / Lessees under the authority of these presents at the rate of Rs. _____ and Rs. _____ respectively per annum per hectare of the area so occupied or used and so in proportion for any area less than a hectare of the area so occupied or used and so in proportion for any area less than a hectare during the period from the commencement of such occupation or use until the area shall cease to be so occupied or used and shall as far as possible restore the surface land so used to its original condition. Surface rent and water rate shall be paid as herein before details in Clause 2. Provided that no such rent / water rate shall be payable in respect of the occupation and use of the area comprised in and roads or ways to which the public have full right of access.

PART – VI

Provisions relating to the Rents and Royalties

RENTS AND ROYALTIES TO BE FREE FROM DEDUCTION ETC. :-

1) The rent, water rate and royalties mentioned in Part V of this schedule shall be paid from free from any deductions to the State Government at any Government treasury in A.P and in such manner as the State Government may prescribed provided always and it is hereby that Rs. 10000/- the balance standing to the credit of Lessee / Lessees on account of the deposit made by him / them as a licensee / licensees over an area which included the said lands shall be retained and accepted by the State Government in satisfaction of the rents and royalties mentioned in Part V until they reach that amount.

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1[The mining lease is renewable in terms of the provisions of the act and rules made thereunder provided that the State Government may for reasons to be recorded in writing reduce the area applied for.

If the lease in respect of the mineral specified in the first schedule to the act renewal will be subject to the prior approval of the Central Government.

If the Lessee / Lessees be desirous of taking renewed lease of the premises hereby demised or any part or parts of them for a further term from the expiration of the term hereby granted and is otherwise eligible, he / they shall prior to the expiration of the last mentioned term give to the State Government twelve calendar months previous notice in writing and shall pay the rents, rates and royalties hereby reserved and shall observe and perform the several covenants and agreements herein contained and on the part of the Lessee / Lessees to be observed and on the part of the Lessee / Lessees to be observed and performed upto the expiration of the term hereby granted. The state Government on receipt of application for renewal shall consider it in accordance with rule 28 of the said rules and shall pass the orders as it deems fit. If renewal is granted, the State Government will at the expenses of the Lessee / Lessees and upon his executing and delivering to the State Government if required a counter part thereof execute and deliver to the Lessee / Lessees a renewed lease of the said premises or part thereof for the further term of 20(Twenty) years at such rents, rates and royalties and on such terms and subject to such covenants and agreements including this present rules, 1960, applicable to Lime Stone (name of the mineral on the day next following the expiration of the term here by granted (No. 1(19)/71 M. VI dt: 9-9-71).

LIBERTY TO DETERMINE THE LEASE:-

3. The Lessee / Lessees may at any time determine this lease by giving not less than 12 calendar months notice in writing to the State Government or to such officer, or authority as the State Government may specify in this behalf and upon the expiration of such notice provided that the Lessee / Lessees shall upon such expiration rendered and pay all rents, water rates, royalties, compensation for damages and other moneys which may then be due and payable under these presents to the Lessors or any other person or persons and shall deliver these presents to the State Government then this lease and the said term and the liberties powers and privileges hereby granted shall absolutely cease and determine but without prejudice to any right or remedy of the lessor in respect of any breach of any of the covenants or agreements contained in these presents.

1[4.A. The State Government may on an application made by the lessee permit him to surrender one or more minerals from his lease which is for a group of minerals on the ground that deposits of that mineral have since exhausted or depleted to such an extent that it is no longer possible to work the mineral economically, subject to the condition that the lessee.

a. Makes an application for such surrender of mineral atleast six months before the intended date of surrender; and

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claim against the Lessee / Lessees or be deemed a breach of this lease in so far as such force majeure, and if through force majeure, and if through force majeure the fulfillment by the Lessee / Lessees of any of the terms and conditions of this lease be delayed, the period of such delay shall be added to the period fixed by this lease. In this clause the expression "force majeure", means act of god/insurrection, riot, civil commotion, strike, earthquake, storm, tidal wave, flood, lightening, explosion, fire and any other happening which the Lessee / Lessees could not reasonably prevent or control.

LESSEE / LESSEES TO RECEIVE HIS / THEIR PROPERTIES ON THE EXPIRY OF LEASE:

5. The Lessee / Lessees having first paid and discharged rents, rates and royalties payable by virtue of these presents may at the expiration or sooner determination of the said term or within six calendar months thereafter (unless the lease shall be determined under clause 1 and 2 of this part and in that case at any time not less than three calendar months nor more than six calendar months after such determination) taken down and remove or his / their own benefit all or my engine machinery, plant, buildings structures, tramways, railways and other work erections and conveniences which may have been erected, set up or placed by the Lessee / Lessees in or upon the said lands and which the Lessee / Lessees is / are not bound to deliver to the State Government under clause 20 of part VII of this schedule and which the State Government shall not desire to purchase.

FORFEITURE OF PROPERTY LEFT MORE THAN SIX MONTHS AFTER DETERMINATION LEASE

6. If at the end of six calendar months after the expiration or sooner determination of the said term under the provision contained in clauses 4 of Part VIII of this schedules become effective there shall remain in or upon the said land any engines, machinery plant, buildings, structures, railways and other work exercise the conveniences or other property which are not required by the Lessee / Lessees in connection with operations in any other lands held by him / them under prospecting licence or mining lease the same shall if not removed by the Lessee / Lessees within on calendar month after notices in writing requiring their removal has been given to the Lessee / Lessees by the State Government be deemed to become the property of the State Government and may be sold or disposed of in such manner as by State Government shall deem fit without liability to pay any compensation or to account to the Lessee / Lessees in respect thereof.

NOTICES

7. Every notice by these presents required to be given to the Lessee / Lessees shall be given in writing to such person resident on the said lands as the Lessee / Lessees may appoint for the purpose of receiving such notices and if there shall been no such appointment then every such notice shall be sent to the Lessee / Lessees by registered post addressed to the Lessee / Lessees at the address recorded in this lease or at such other address in India as the Lessee / Lessees may, from time to time in writing to the State Government designate for the receipt of notices and every such service shall be deemed to be proper and valid service upon the Lessee / Lessees and shall not be questioned or challenged by him.

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TO INDEMNIFY GOVERNMENT AGAINST ALL CLAIMS :-

4) The lessee/lessees shall make and pay such reasonable satisfaction and compensation as may be assessed by lawful authority in accordance with the law in force on the subject for all damage, injury or disturbance which may be done by him/them in exercise of the powers granted by this lease and shall identify and keep indemnified fully and completely the State Government against all claims which may be made by any person or persons in respect of any such damage, injury or disturbance and all costs and expenses in connection therewith.

TO SECURE AND KEEP GOOD CONDITION PITS, SHAFTS ETC.,

5) The lessee/lessees shall during the subsistence of this lease well as sufficiently secure and keep open with timber or other durable means all pits shafts and workings that may be made or used in the said lands and make and maintain sufficient fences to the satisfaction of the State Government round every such pit shaft or working whether the same is abandoned or not and shall during the same period keep all workings in the said lands except such, as may be, abandoned accessible free from water and foul air as far as possible.

TO STRENGTHEN AND SUPPORT THE MINE TO NECESSARY EXTENT

6) The lessee/lessees shall strengthen and support to the satisfaction of the Railway Administration concerned or the State Government, as the case may be, any part of the mine which in its opinion requires such strengthening or support for the safety of any railway, reservoir, canal, road and any other public works or structures.

TO ALLOW INSPECTION OF WORKINGS

7) The lessee/lessees shall allow any officer authorised by the Central Government or the State Government in that behalf to enter upon the premises including any building excavation or land comprised in the lease for the purpose of inspecting, examining comprising surveying, I (prospecting) and making plans thereof, sampling and collecting a data and the lessee/lessees shall with proper person employed by the lessee/lessees and acquainted with the mines and work effectual assist the officer, agents, servants and workmen in conducting every such section and shall afford them all facilities, information connected with them the working of the mines which they may reasonable require and also shall and will confirm and observe all orders and regulation which the Central and State Governments as the result of such inspection or otherwise way from time to time seem fit impose. (NO. MII-169(44) 61, Dated 7-9-61)

TO REPORT ACCIDENT

8) The Lessee / Lessees shall without delay send to the Deputy Commissioner / Collector a report of any accident causing death or serious bodily injury or serious injury to property or serious affecting or endangering life or property which may occur in the course of the operations under this lessee.

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TO REPORT DISCOVERY OF OTHER MINERALS

9) The Lessee / Lessees shall report to the State Government the discovery in the leased area of any mineral not specified in the lease within sixty days of such discovery along with full particulars of the nature and position of each such find. If any mineral not specified in the lease is discovered in the leased area, the lessee / lessees shall not win and dispose of such mineral unless such mineral is included in the lease or a separate lease is obtained therefore.

TO KEEP RECORDS AND ACCOUNTS REGARDING PRODUCTION AND EMPLOYEES

10) The lessee / lessees shall at all time during the said term keep or cause or be kept at an office to be situated upon or near the said lands correct and intelligible books of accounts which shall contain accurate entries showing from time to time.

1) Quantity and quality of the said mineral / minerals realised from the said lands.

2) Quantity of the various quantities of ores beneficiated or converted (for example coal converted into coke).

3) Quantity of the various qualities of the said mineral / minerals sold and exported separately.

4) Quantities of the various qualities of the said mineral / minerals otherwise disposed of an the manner and purpose of such disposal.

5) The prices and all other particulars of all sales of said mineral / minerals.

6) The number of persons employed in the mines or works or upon the said lands specifying nationality, qualifications and pay of the technical personnel.

7) Such other facts, particulars and circumstances as the Central or the State Governments may from time to time require and shall also furnish free of charge to such officers and at such times as the Central and State Governments may appoint true and correct abstract all or any such books of accounts and such information and writtens to all or any of the matters aforesaid as the State Government may prescribe and shall at all reasonable times allow such officers of the Central or State Governments shall in that behalf appoint to enter into and have free access the said officers for the purpose of examining and inspecting the said books of accounts plans and records to the copies thereof and make extracts therefrom.

TO MAINTAIN PLANS ETC.

11) The Lessee / Lessees shall at all times curing the said term of maintain at the mine office correct intelligible, up-to-date and complete plans and sections of the mines in the said lands. They shall show all the operations, and workings and all the trenches, pits and drills made by him

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/ them under the lease faults and other disturbances encountered and geological data and all such plans and sections shall be amended and filled up by and from actual surveys to be made from that purpose at the end of twelve months or any period specified from time to and the lessee / lessees shall furnish free of charge to the Central and State Governments true and correct copies of such plans and sections whenever required, accurate record of all trenches, pits and drilling shall show:

a) The sub-soil and strata through which they pass.

b) Any mineral encountered.

c) Any other matter of interest and all data required by the Central and State Governments, from time to time.

The Lessee / Lessees shall allow any officer of the Central or the State Government, authorised in this behalf by the Central Government to inspect the same at all reasonable times. He / they shall also supply when asked for by the State Government / the coal Controller/ the Director General, Geological Survey of India / the Controller, Indian Bureau of Mines a composite plan of the area showing thickness, dip, inclination etc of all the seams as also the quantity of reserves quality wise.

11.A. The Lessee shall pay a wage not less than the minimum wage prescribed by the Central / State Government from time to time.

11.B. The Lessee shall comply with provisions of the Mines Act, 1952.

11.C The lessee shall take measures for the protection of environment like plantings of trees, reclamation of land, use of pollution control devices; and such other measures as may be prescribed by the Central or State Government from time to time, at his own expense.

11.D. The lessee shall pay compensation to the occupier of the land on the date and in the manner laid down in these rules.

[11.E. The lessee shall in the matter of employment, give preference to the trials and to the persons who became displace because of the taking up of mining operations.]

Act 67 of 1957

12. The Lessee / Lessees shall be bound by such rules as may be issued from time to time by the Government of Indian under Section 18 of the Mines and Minerals (Regulation and Development) Act, 1957 (Act 67 of 1957) and shall not carry on mining or other operations under the said lease in any way other than as prescribed under these rules.

TO PROVIDE WEIGHING MACHINE

13. Unless specifically exempted by the State Government, the Lessee / Lessees shall provide and at all times keep at or near the pit head or each of the pit heads at which the said minerals shall be brought to bank properly constructed and efficient weighting machine and shall weigh or cause to be weighed thereon all the said minerals from time to time brought, to bank sold, exported and converted and also the converted products and shall at the close of each day cause the total weights, ascertained by such means of the said minerals, ores products raised, sold exported and converted during the

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previous twenty four hours to be entered in the aforesaid books of accounts. The Lessee / Lessees shall permit the State Government at all times during the said term to employ any person or persons to be present at the weighing of the said minerals as aforesaid and to keep accounts thereof and to check the accounts kept by the Lessee / Lessees. The Lessee / Lessees shall give 15(Fifteen) days previous notice in writing to the Deputy Commissioner / Collector of every such measuring or weighing in order that some officer on his behalf may be present there at.

TO ALLOW TEST OF WEIGHING MACHINE

14. The Lessee / Lessees shall allow any person or persons appointed in that behalf by the State Government at any time or times during the said term to examine and test every weighing machine to be provided and kept aforesaid and the weights used therewith in order to ascertain whether the same respectively are correct and good repair and order and if upon any such examination or testing any such weighing machine or weights shall be found incorrect or out of repairs or order the State Government may require that the same be adjusted, repaired and put in order by at the expense of the Lessee / Lessees and if such requisition be not complied with within fourteen days after the same shall have been made, the State Government may cause such weighing machine or weights to be adjusted, repaired, and put in order and the expense of so doing shall be paid by the lessee/lessees to the State Government or demand and if upon any such examination or testing as aforesaid any error shall be discovered in any weighing machine or weights to the prejudice of the State Government such error shall be regarded having existed for three calendar months previous to the discovery thereof or from the last occasion of so examining and testing the same weighing machine and weights in case such occasion shall be within such period of three months and case such occasion shall be within such period of three months and the said rent royalty shall be paid and accounted for accordingly.

TO PAY COMPENSATION FOR INJURY OF THIRD PARTIES :-

15. The lessee / lessees shall make and pay reasonable satisfactory and compensation for all damage, injury or disturbance of person or property which may be done by or on the part of Lessee / Lessees in exercise of the liberties and power granted by these presents and shall at all times save harmless and keep indemnified the State Government from and against all suits claims and demands which may be brought or made by any person or persons in respect of any such damage, injury or disturbance.

NOT TO OBSTRUCT WORKING OF OTHER MINERALS

16. The Lessee / Lessees will exercise the liberties and powers hereby granted in such a manner as to offer no unnecessary or reasonably avoidable obstruction or interruption to the development and working within the said lands of any minerals not included in this lease and shall at all times afford to the Central and State Governments and to the holders of Prospecting Licenses or mining leases in respect of any such minerals or any other minerals within any land adjacent to the said lands as the case may be reasonable means of access and safe and convenient passage upon and accords the said lands to such minerals for the purpose of getting working developing and carrying away the same provided that the lessee / lessees shall receive reasonable compensation for any damage or injury which he / they may sustain by reason or in consequence of the use of such passage by the such lessees or holders of prospecting licences.

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TRANSFER OF LEASE

17. (1) The lessee / lessees shall not, without the previous consent in writing of the State Government, (No. 1(33) / 67 – MII, Dt. 30.03.1968)

a) Assign, sublet, mortgage or in any other manner, transfer the mining lease or any right, title or interest therein; or

b) Enter into or make any arrangement, contract or understanding whereby the lessee / lessees will or may be directly or indirectly financed to a substantial extent by, or under which the lessee's operations or undertaking will or may be substantially controlled by any person or body of persons other than the lessee / lessees; provided that the State Government shall not give its written consent unless.

a) The lessee has furnished an affidavit along with his application for transfer of the mining lease specifying therein the amount that he has already taken or proposes to take as consideration from the transferee;

b) The transfer of the mining lease is to be made to a person of body directly undertaking mining operations. (No.1(33)/67-MII, Dt.30.3.1968)

c) Without prejudice to the above provisions, the lessee / lessees may subject to the conditions specified in the proviso to rule 35 of the said rules, transfer this lease or any right, title or interest therein to a person 2 (who has filed an affidavit stating that he has filed upto date income tax returns, paid income tax, assessed on him and paid the income tax on the basis of self assessment as proved in the Income Tax Act 1961 (43) of 1961 on payment of five hundred rupees) to the State Government.

Provided that the Lessee / Lessees shall make available to the transferee the original or certified copies of all plans of abandoned workings in the area and in a belt 65 meters wide surround it.

Provided further that where the mortgagee is an institution or a Bank or a Corporation specified in Schedule V, it shall not be necessary for any such institution, Bank or Corporation to (meet with the requirements relating to income tax and the said valid clearance certificate) (G.S.R.1333).

3) The State Government may, by order in writing, determine the lease at any time of the lessees/lessees has/have in the opinion of State Government committed a breach of any of the above provisions or has/have transferred the lessee or any right, title or interest there in otherwise than in accordance with clause (2).

Provided that no such order shall be made without giving the lessee/lessees a reasonable opportunity of stating his/their case.

NOT TO BE FINANCED OR CONTROLLED BY A TRUST, CORPORATION, FIRM OF PERSON :-

18. The lease shall not be controlled and the lessee/lessees shall not allow themselves to be controlled by any Trust, Syndicate, Corporation, Firm or person except with the written consent of the Central Government. The lessee/lessees shall not enter into or make any arrangement compact or understanding where by the lessee / lessees will or may be directly or indirectly financed by or under which the lessee's / lessees operations or undertakings will or may be carried on directly or indirectly by or for the benefit of or subject to the control of any Trust, Syndicate, Corporation, Firm

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or Persons unless with the written sanction given prior to such arrangement compact or understanding being entered into or made of the Central Government and in every such arrangement compact or understanding as aforesaid (entered into or made with such sanction as aforesaid) shall only be entered into or made and shall always be subject to an express condition binding upon the other party or parties thereto that on the occasion of a State of emergency of which the President of India in his discretion shall be the sole judge it shall be terminable if so required in writing by the State Government and shall in the event of any such requisition being made the forth-with thereafter determined by the lessee/lessees accordingly.

LESSEES SHALL DEPOSIT ANY ADDITIONAL AMOUNT NECESSARY

19. Whenever the security deposit of Rs. 10,000/- or any part thereof or any further sum hereafter deposited with the State Government in replenishment thereof shall be forfeited or applied by the Central or State Government pursuant to the power herein after declared in that behalf of the lessee / lessees shall deposit with the State Government such further sum as may be sufficient with the unappropriated part thereof to bring the amount in deposit with the State Government upto the sum of Rs. 10,000/-

DELIVERY OF WORKINGS IF GOOD ORDER TO STATE GOVERNMENT AFTER DETERMINATION OF LEASE

20. The lessee/lessees shall at the expiration or sooner determination of the said term or any renewal thereof claim upto the State Government all mines, pits shafts, inclines, drifts, levels, waterways, airways and other works existing or hereafter to be sunk or made on or under the said lands except such as have been abandoned with the sanction of the State Government and in any ordinary and fair course of working all engines, machinery, plant, buildings, structures, other works and conveniences which at the commencement of the said term were upon or under the said lands and all such machinery set up by the lessee / lessees below ground which cannot be removed without causing injury to the mines or works under the said lands (except such of the same may be with the sanction of the State Government have become disused.) and all buildings and structures of bricks or stone erected by the lessee/lessees above ground level in good repair order and condition and fit in all respects for further working of the said mines and the said mineral.

RIGHT OF PRE EMPTION

21. a) The State Government shall from time to time and all times during the said term have the right (to be exercised by notice in writing to the lessee/lessees) or pre-emption of the said minerals (and all products thereof) lying in or upon the said lands hereby demised or else-where under the control of the lessee/lessees and lessee/lessees shall with all possible expenditure deliver all minerals or products or minerals purchased by the State Government under the power conferred by this provision in the quantities at the time in the manner at the place specified in the notice exercising the said right.

b) Should the right of pre-emption conferred by this present provision be exercised and a vessel chartered to carry the minerals or products thereof procured on behalf of the State Government or the Central Government be detained and demurrage at the port of loading the lessee/lessees shall pay the amount due to causes beyond the control of the Lessee/Lessees.

LESSEE P. Bayapa Reddy

ASST. DIRECTOR OF MINES & GEOLOGY
KURNOOL

c) The price to be paid for all minerals or products of minerals taken in pre-caption by the State Government in exercise of the right hereby conferred shall be the fair market price prevailing at the time of pre-emption provided that in order to assist in arriving at the said fair market price the lessee / lessees shall if so required furnish to the State Government for the Confidential information of the Government particulars of the quantities, descriptions and prices of the said minerals or products thereof sold to other customers and of charters entered into for freight for carriage of the same and shall product to such officer or officers as may be directed by the State Government original or authenticated copies of contracts and charter parties entered into for the sale or freightage of such minerals or products.

d) In the event of the existence of a state of war or emergency (of which existence the President of India shall be the sole judge and a notification to this effect in the Gazette of India shall be conclusive proof), the State Government with the consent of the Central Government shall from time to time and all times during the said term have the right (to be exercised by a notice in writing to the lessee/lessees) forthwith take possession and control of works, plant, machinery premises of the lessee/lessees on or in connection with the said lands or operations under this lease and during such possession or control the lessee/lessees shall conform to and obey all directions given or behalf of the Central Government or State Government regarding use of employment of such works, plans premises and minerals provided that fair compensation which shall be determined in default of Agreement by the State Government shall be paid to the lessee/lessees for all loss or damage sustained by him/them by reason or in consequence of the exercise of the powers conferred by this clause and provided also that the exercise of such powers shall not determined the said term hereby granted or effect the term and provisions of these present further than may be necessary to give effect to the provisions of this clause.

EMPLOYMENT OF FOREIGN NATIONAL

22) The lessee / lessees shall not employ, in connection with the mining operations any person who is not an Indian National except with the previous approval of the Central Government.

RECOVERY OF EXPENSES INCURRED BY THE STATE GOVERNMENT

23) If any of works or matters which in accordance with the covenants in that behalf herein before contained are to be carried or performed by the lessee/lessees be not so carried out or performed within the time specified in that behalf, the State Government may cause the State Government demand all expenses which shall be incurred in such carrying out or performance of the same and the decision of the State Government as to such expense shall be final.

LESSEE P. Bayapa Reddy

ASST. DIRECTOR OF MINES & GEOLOGY
KURNOOL.

FURNISHING OF GEOPHYSICAL DATA

24) The lessee/lessees shall furnish:-

a) All geophysical data relating to mining fields or engineering and ground water surveys, such as anomaly maps, sections, plans, structures, contour maps logging collected by him/them during the course of mining operations to the Director General Geological Survey of India, Calcutta.

b) All information pertaining to investigations of radioactive minerals collected by him/them during the course of mining operations to the Secretary, Department of Atomic Energy, New Delhi.

Date or Information referred to above shall be furnished every year reckoned from the date of commencement of the period of the mining lease.

PART – VIII

The covenants of the State Government :

LESSEE / LESSEES MAY HOLD AND ENJOY RIGHTS QUIETLY :-

1) The Lessee/Lessees paying the rents, water rate and royalties hereby reserved and observing and performing all the covenants and agreements herein contained and on the part of the lessee / lessees to be observed and performed shall and may quietly hold and enjoy the rights and premises hereby demised for and during the term hereby granted without any unlawful interruption from or by the State Government, or any person rightfully claiming under it.

REQUISITION OF LAND OF THIRD PARTIES AND COMPENSATION THEREOF:

2) If in accordance with the provision of clause 4 of part VII of the Schedule the Lessee / Lessees shall offer to pay to an occupier of the surface of any part of the said lands compensation for any damage or injury which may arise from the proposed operations of the Lessee / Lessees and the said occupier shall refuse his consent to the exercise of the right and powers reserved to the State Government and demised to the Lessee by Lessees by this presents and the Lessee by lessees shall report the matter to the State government and shall deposit with it the amount offered as compensation and if the Central / State Government are satisfied that the amount of the compensation offered is fair and reasonable or if it is not so satisfied and the lessee/lessees have deposited with it such further amount as the Central/ State Governments shall consider fair and reasonable the State Government shall order the occupier to allow the lessee/lessees to enter the land to carry out such operations as may be necessary for the purpose of this lease. In assessing the amount of such compensation, the State Government shall be guided by the Principles of the Land Acquisition Act.

LESSEE P. Bangarayana Reddy ASST. DIRECTOR OF MINES & GEOLOGY
KURNOOL.

b. gives an undertaking that he will to cause any hindrance in the working of the minerals so surrendered by any other person who is subsequently granted a mining lease for that mineral (No. III – 152(18)/61 dated: 4-12-62)

REFUND OF SECURITY DEPOSITS:-

5. On such date as the State Government may elect within 12 calendar months after the determination of this lease or of any renewal thereof, the amount of the security deposit paid in respect of this lease and then remaining in deposit with the State Government and not required to be applied to any of the purposes mentioned in this lease shall be refunded to the Lessee / Lessees. No interest shall run on the security deposit.

PART – IX

General Provision

OBSTRUCTIONS TO INSPECTION

1. In case the Lessee / Lessees of his / their transferee / assignee does / do not allow entry or inspection by the officers authorised by the Central or State Government under clause (i), (j) or (1) of sub rule (1) of rule 27 of said rules, the State Government shall give notice in writing to the Lessee / Lessees requiring him/them to the show cause within such time as may be specified in the notice why the lease should not be determined and his / their security deposit forfeited and if the Lessee / Lessees fails/fail to show cause within therefore said time to the satisfaction of the State Government the State Government may determine the lease and forfeit the whole or part of the security deposit.

PENALTY IN CASE OF DEFAULT IN PAYMENT ON ROYALTY AND BREACH OF COVENANTS :-

2. If the Lessee / Lessees or his / their transferee or assignee makes / make any default in payment of rent or water rate or royalty as required by the section 9 of the Act or commits a breech of any of the conditions and covenants other than those referred to in covenant (1) above, the State Government shall give notice to the Lessee / Lessees requiring him / them to pay the rent, water to royalty or remedy the breeches the case may be, within sixty days from the date of receipt of the notice and if the rent, water rates and royalty are not paid or the breach is not remedied within such period, the State Government may without prejudice to any proceedings that may be taken against him / them, determine the lease and forfeit the whole or part of the security deposit.

PENALTY FOR REPEATED EMBRACES OF COVENANTS

3. In case of repeated breaches of covenants and agreements by the said Lessee / Lessees for which notice has been given by the State Government in accordance with clause (1) and (2) aforementioned on earlier occasion, the State Government without giving any further notice, may impose such penalty not exceed twice the amount of the annual dead rent specified in clause 2, part V.

FAILURE TO FULFIL THE TERMS OF LEASES DATE TO "FORCE MAJEURE"

4. Failure on the part of the Lessee / Lessees to fulfill any of the terms and conditions of this lease shall not give the Central or State Government any

LESSEE P Bangaru Reddy

ASST. DIRECTOR OF MINES & GEOLOGY
KURNOOL.

IMMUNITY OF STATE GOVERNMENT FROM LIABILITY TO PAY COMPENSATION:-

8. If in any event the orders of the State Government are revised, reviewed or cancelled by the Central Government in pursuance of proceedings under Chapter VII of the Mineral concession rules, 1960, Lessee / Lessees shall not be entitled to compensation for any loss sustained by the Lessee / Lessees in exercise of the powers and privileges conferred upon him / them by these presents.

8. a) The lease is executed at Kurnool the capital town of the State of Andhra Pradesh and subject to the provision of article 226 of the constitution of India it is hereby agreed upon by the lessee / lessor that in the event of any dispute in relation to the area under lease, condition of lease the dues realisable under the lease and in respect of all matters touching the relationship of the lessee and the lessor the suits (or appeals) shall be filed in the civil courts at Kurnool (Name of the city and it is hereby expressly agreed that neither party shall be competent to file a suit or bring any action of file any petition at any place other than the courts named above A.P. High Court, Hyderabad, Andhra Pradesh].

9. For the purpose of stamp duty the anticipated royalty from the demised lands is Rs. _____ per year.

10. a. The mining lease is renewable in terms of the provisions of the act and rules made there under.

b. For the words and figure with letter "In accordance with rule 24-A of the said rules" the following words shall be substituted namely.

In accordance with the provisions of the act and rules made here under.

IN WITNESS WHEREOF these presents have been executed in the manner hereunder appearing the day and year first above written.

Signed by L. C. Rama Chandra Reddy, M.Sc
Assistant Director of Mines and Geology, Kurnool for and on behalf of the Governor / President of India.

LESSEE P. Bayapa Reddy

ASST. DIRECTOR OF MINES & GEOLOGY
KURNOOL.

GOVERNMENT OF ANDHRA PRADESH
PROCEEDINGS OF THE ASST. DIRECTOR OF MINES AND GEOLOGY: BANAGANAPALLI
(PRESENT: SRI Ch. SURYACHANDRA REDDY, M.Sc.,Tech., ASSISTANT DIRECTOR

PROCEEDINGS NO.1360/M4/2006 DATED 15-11-2006

Sub: Mines and Minerals – Major Minerals – Mining lease for Lime stone – in S.No 191/A1, 191/A2,, 188/3 and 195/4A3A(P) of Kolimigundla Village-Kolimigundla Mandal- Kurnool District- over an extent of 7.875 hectares – Lease held M/s Sri Sainath Minerals – Transfer in favour of M/s S.J.K Steel Plant Limited for the unexpired portion of the lease period upto 22.8.2002 orders- issued.

Ref: 1) G.O. Ms .No 325 Ind & Com.(M.I) Department Dated 26.7.20063
2) Proceedings no.1328/M4/2001 dated 23.8.2002 of the Asst. Director of Mines and Geology, Kurnool
3) G.O.Ms.No.64 Ind. & Com. (M.I) Department dated 6.3.2006
4) MemoNo.28380/R4-2/2005 dt 14.3.2006 of the Director of Mines and Geology, Hyderabad.
5) Govt. Memo No.9158/M.I(1)/2006 dated 21.9.2006
6) Letter dated 26.10.2006 from M/s S.J.K. Steel Plant Limitesd.

***

ORDER:

In the G.O. first cited read above the Government have granted a Mining lease for Lime stone over an extent of 11.923 hectares in S.No 191/A1, 191A2, 195/4A3A, 195/4A2A and 188/3 of Kolimigundla Village, Kolimigundla Mandal, Kurnool District in favour of M/s Sri Sainath Minerals for a period of 20 (Twenty) Years and the Mining Lease deed was executed on 23.8.2002 and the lease will be in force up to 22.8.2022

Further the Government through the G. O. third cited have accorded permission under Rule 37(1) of Mineral Concession Rules, 1960 for transfer of Mining Lease held by M/s Sri Sainath Minerals for part transfer of Mining Lease for Lime stone over an extent of 7.875 hectares in S.Nos. 191/A1, 191/A2,, 188/3 and 195/4A3A(P) of Kolimigundla Village and Mandal, Kurnool District in favour of M/s S.J.K. Steel Plant Limited from out of total mining lease area of 11.923 hectares in S.No. 191/A1, 191/A2,, 195/4A3A, 195/4A2A and 188/3 of Kolimigundla Village and Mandal, Kurnool District, held by M/s Sri Sainath Minerals duly retaining an area of 4.048 hectares with them for the unexpired portion of the lease period up to 22.8.2022 as per the terms and conditions as ordered in the G.O. first read above.

Further the Government through the reference 5th cited has granted extension of time for another 3 months only from the date of issue of the memo. Through the reference 6th cited M/s S.J.K. Steel Plant Limited have submitted required documents for execution of part transfer of mining lease.

In view of the above circumstances, permission is hereby accorded to M/s S.J.K Steel Plant Limited to continue the Mining operations for extraction of Lime stone over an extent of 7.875 hectares in S.No. 191/A1, 191/A2,, 188/3 and 195/4A3A(P) of Kolimigundla Village and Mandal, Kurnool district, out of total mining lease area of 11.923 hectares in S.No. 191/A1, 191/A2,, 195/4A3A, 195/4A2A and 188/3 of Kolimigundla Village and Mandal, Kurnool District, held by M/s Sri sainath Mineral duly retaining an area of 4.048 hectares with them for the unexpired portion of the mining lease period up to 22.8.2022 subject to the Conditions of Mines & Minerals (Development & Regulation) Act 1957 and the rules made there under and also subject to the satisfaction of the conditions in Form-O. The lessee should obtain Commercial Tax Registration before selling mineral.

For: Sri Sainath Minerals
Partner

For SJK Steel Plant (Pvt),
Contd...2
Authorised Signature

The transferee should erect boundary pillars around the leased area and maintain during subsistence of lease. The transferee should maintain the Labors register, Production and dispatch, Sales, stocks accounts and send abstracts for finalisation of M.R.A every year along with annual returns , surface working plans. The transferee should submit prescribed monthly and annual return in the prescribed form to the Director of Mines & Geology, Hyderabad, Deputy Director of Mines and Geology, Kurnool and the Asst. Director of Mines & Geology, Banaganaplli and other concerned as per M.C.D.R. 1988.

ASST. DIRECTOR OF MINES & GEOLOGY
BANAGANAPALLI

To

M/s S.J.K. Steel Plant Limited, Managing Director Sri Y. Jithin Kumar, Tadipatri Anantapur District.

Copy to M/s Sri Sainath Minerals, Prop: P. Bayapu Reddy, Kolimigundla Village and Mandal, Kurnool District

Copy submitted to the Director of Mines & Geology, Hyderabad together with a copy of Mining lease deed in duplicate for favour of information.

Copy submitted to the Deputy Director of Mines & Geology, Kurnool together with a copy of Mining lease deed for favour of information.

Copy submitted to the Control General, Indian Bureau of Mines, Nagpur along with a copy of Mining lease deed for favour of information.

Copy to the Labour Enforcement officer, Guntakal for information.

Copy submitted to the Secretary, Ind & Com.Department along with the Mining lease deed and sketch (through the D.M.& G, Hyderabad) for favour of information.

Copy submitted to the District collector, Kurnool for favour of information.

Copy to the Mandal Revenue officer, Kolimigundla

Copy to the Deputy Commissioner, C.T.O, Kurnool for information

ANNEXURE-III

FORM – O

MODEL FORM FOR TRANSFER OF MINING LEASE

(See Rule 37-A)

WHEN THE TRANSFEROR IS AN INDIVIDUAL

This indenture made this ---------- day of November, 2006 between M/s. Sri Sainath Minerals, Kolimigundla (Name of the person with address and occupation)(hereinafter referred to as the 'transferor' which expression shall where the context so admits be deemed to include his heirs, executors, administrators, representatives and permitted assigns)

WHEN THE TRANSFEROR IS A REGISTERED FIRM

Sri P. Rajia Pinkreddy ----------(Name of the person with address of all the partners) all carrying on business in partnership under the firm name and style of M/s. Sri Sainath Minerals (Name of the firm) registered under the Indian partnership Act, 1932 (9 of 1932) and having their registered office at --------- Kolimigundla (herein after referred to as ' transferor' which expression where the context so admits be deemed to include all the said partners, their respective heirs, executors, legal representatives and permitted assigns).

WHERE THE TRANSFEROR IS A REGISTERED COMPANY

--(Name of Company) a company registered under -------------------------(Act under which incorporated) and having its registered office at --(Address)(hereinafter referred to as the 'transferor' which expression shall where the context so admits be deemed to include its successors and permitted assigns) of the first part; and

WHEN THE TRANSFEREE IS AN INDIVIDUAL

--(Name of person with address and occupation)(hereinafter referred to as the 'transferee' which expression shall where the context so admits be deemed to include heirs, executors, administrators, representatives and permitted assigns).

WHEN THE TRANSFEREES ARE MORE THAN ONE INDIVIDUAL

--(Name of person with address and occupation) and -- (Name of person with address and occupation)(hereinafter referred to as the 'transferee' which expression shall where the context so admits be deemed to include their respective heirs, executors, administrators, representatives and their permitted assigns)

WHEN THE TRANSFEREE IS A REGISTERED FIRM

--(Name and address of all the partners all carrying on business in partnership under the firm name and style of)---- --(Name of the firm) Registered under the Indian Partnership Act, 1932 and having their registered Office at ------------ -(hereinafter referred to as the 'transferee' which expression where the context so admits be deemed to include all the said partners, their respective heirs, executors legal representatives and permitted assigns).

For : Sri Sainath Minerals
TRANSFERER
Proprietor

For SJK Steel Plant Ltd.
Authorised Signatory
TRANSFREE

ASST. DIRECTOR OF MINES
GEOLOGY, BANAGANAPALLI

WHEN THE TRANSFEREE IS A REGISTERED COMPANY

M/s S.J.K. Steel Plant (Name of Company) a company registered under (Act under which incorporated) and having its registered office at - Tadipatri Anantapur Dist. (Address)(hereinafter referred to as the 'transferee' which expression shall where the context so admits be deemed to include its successors and permitted assigns) of the second part; and

The Governor of Andhra Pradesh (hereinafter referred to as the State Government which expression shall where the context so admits be deemed to include the successors and assigns) of the third part.

Whereas by virtue of an indenture of lease dated the 22.8.2001 and registered as No. 1328/2001 on 22.8.2001 (date) in the office of the sub-registrar of ---------- Kanaganapalli (Place)(hereinafter referred to as lease) the original where of is attached hereto and , marked 'A' entered in to between the State Government (therein called the lesser) and the transferor (therein called the lessee), the transferor is entitled to search for, win and work the mines and minerals in respect of Limestone (Name of minerals(s)in the lands described in the Schedule thereto and also in Schedule annexed hereto for the term and subject to the payment of the rents and Royalties and observance and performance of the lessee's convenient and conditions in the said deed of lease reserved and contained including a covenant not to assain the lease or any interest there under without the previous sanction of the State Government.

And whereas the transferor is now desirous of transferring and assigning the lease to the transferee and the State Government has, at the request of the transferor, granted (with the prior approval of the Central Government) permission to the transferor vide order No. ---- 66 dated 6.3.2006 to such a transfer and assignment of the lease upon the condition of the transferees entering in to an agreement is and containing the terms and conditions hereinafter set forth.

NOW THIS DEED WITNESSETH AS FOLLOWS:-

1. Omitted by G S R 724(E) dated 27.9.1994

2. The transferee hereby covenants with the State Government the form and after the transfer and assignment of the lease the transferee shall be bound by, and be liable to perform observe and conform and be subject to all the provisions of all the covenants stipulations contained in said herein before recited lease in the same manner in all respects as if the lease had been granted to the transferee as the lessee there under and he has originally executed it as such.

3. It is further hereby agreed and declared by the transferor of the one part and the transferee of the other part that-

i) The transferor and the transferee declare that they have ensured that the mineral rights over the area for which the mining lease is being transferred vest in the State Government.

ii) The transferor hereby declares that he has not assigned subject, mortgaged or in any other manner transferred the mining lease now being transferred and that no other person or persons has any right title of interest where under in the present mining lease being transferred.

iii. The transferor further declares that he has not entered into or made any agreements, contracted or understanding where by he had been or is being directly or indirectly financed to a substantial extent by or under which transferor operation or understanding where or are being substantially controlled by any person or body of persons other than the transferor.

For S.J.K. Steel Plant Ltd.,

For : Sri Sainathi Minerals
TRANSFEROR

Authorised Signatory
TRANSFEREE

ASST. DIRECTOR OF MINES
GEOLOGY, BANAGANAPALLI

GOVERNMENT OF INDIA
MINISTRY OF MINES
INDIAN BUREAU OF MINES
Office of the Regional Controller of Mines, Hyderabad.

Regd po

No.AP/KNL/MP/Lst-78/Hyd.

Kendriya Sadan, I Floor,
Sultan Bazar, Koti,
Hyderabad-500 095.
Date: 30 APR 201

To
Sri P.Bayapu Reddy,
M/s Sainath Minerals,
At &P.O.Kolimgundla-518 123
Kurnool District, Andhra Pradesh.

Corrigendum to Approval Letter

Sub: Approval of Modifications to Approved Mining Plan fin respect Kolimigundla Limestone mine over an extent of 4.048 ha in Sy.no.195/4A2A, 195/4A3A(Govt Land) and 188/3 (Patta land) of Kolimigundla Village and Mandal Kurnool district, AP of Sri P.Bayapu Reddy submitted under Rule 22(6) of MCR,1960 – Correction in area – reg.

Sir,

In the Approval letter issued vide letter of even no. dated 23.4.2013 on the subject area, the extent in the subject may be read as 4.048 hectare instead of 19.944.048 hectare.

Yours faithfully,

(P.N.Sharma)
Regional Controller of Mines

Copy to

1) The Director of Mines Safety, Bellary Region, 31 Infantry Road, Cantonment ,Bellary-583104
2) The Director of Mines and Geology, Govt. of Andhra Pradesh, Hyderabad .
3) Sri K.Prabhakara Reddy,RQP, H.no.1-17 Aswini nilaya, JP nagar, 2nd cross, Hosepet-583 201, Bellary district, Karnataka.

(P.N.Sharma)
Regional Controller of Mines

ANNEXURE - IV

GOVERNMENT OF INDIA
MINISTRY OF MINES
INDIAN BUREAU OF MINES
Office of the Regional Controller of Mines, Hyderabad.

Regd post

'KNL/MP/Lst-78/Hyd.

Kendriya Sadan, I Floor,
Sultan Bazar, Koti,
Hyderabad-500 095.
Date: 25 APR 2013

Bayapu Reddy,
ainath Minerals,
.O.Kolimgundla-518 123
ol District, Andhra Pradesh.

Approval of Modifications to Approved Mining Plan fin respect Kolimigundla Limestone mine over an extent of 19.944.048 ha in Sy.no.195/4A2A, 195/4A3A(Govt Land) and 188/3 (Patta land) of Kolimigundla Village and Mandal Kurnool district, AP of Sri P.Bayapu Reddy submitted under Rule 22(6) of MCR,1960.

Your letter No. Nil dated 10.12.2012 submitting final bound copies

In exercise of the power conferred by the clause (b) of sub-section (2) of Section-5 of s and Minerals (Development and Regulation) Act, 1957, read with Government of India t No.S.O. 445(E), dated 28.4.87, I hereby approve the above said modified mining plan. approval is subject to the following conditions:

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

This Modifications in Approved Mining plan (including Progressive Mine Closure Plan) is approved without prejudice to any order or direction from any court of competent jurisdiction.

It is also clarified that the approval of your aforesaid modification of approved Mining plan (including Progressive Mine Closure Plan) does not any way imply the approval of the Government in terms of any other provision of the Mines and Minerals (Development & Regulation) Act, 1957, or the rules framed there under and any other law.

It is further clarified that the approval of the Mining plan (including Progressive Mine Closure Plan) is subject to the provision of Forest (Conservation) Act, 1980, Forest Conservation Rules, 2003 and other relevant statutes, orders and guidelines as maybe applicable to the lease area from time to time.

Your attention is invited to the Hon'ble Supreme Court's Interim Order on WP(C) No. 202 dated 12.12.1996 for compliance. The Approval of the Scheme of Mining (including Progressive Mine Closure Plan) is therefore, issued without prejudice to and is subject to the said direction of the Hon'ble Supreme Court as applicable in your case.

Provisions of the Mines Act, 1952 and Rule and Regulations made there under including submission of notice of opening, appointment of Manager and other statutory officials as required by the Mines Act, 1952 shall be complied with.

Clearance/consent/No Objection from Ministry of Environment & Forest, Central Pollution Control Board, State Pollution Controlled Board as applicable in this case should be obtain. A copy of the same should be submitted to this Office with in a period of one month from the date of approval, failing which the approval shall be deemed to have

viii) A copy of EIA/EMP report, approved by MOEF, New Delhi, should be submitted to this office within one month of approval letter.

ix) If anything is found to be concealed as required by the Mines Act in the contents of approved Mining plan (including Progressive Mine Closure Plan) and the proposal for rectification has not been made, the approval shall be deemed to have been withdrawn with immediate effect, further at any stage, if it is observed that the information furnished in the document are incorrect or misrepresent facts, the approval of the document shall be revoked with immediate effect.

x) The Environment Monitoring Cell of the Company shall continue monitoring ambient air quality, dust fall rate, water quality, soil sample analysis and noise level measurements on various stations established for the purpose both in the core zone and buffer zone as per Dept. of Environment guidelines and keeping in view CCOM's Circular No.3/92 season-wise every year by engaging the services, preferably of an Environmental laboratory approved by MOEF/CPCB. The data so generated shall be maintained in a bound paged register kept for the purpose and the same shall be made available to the inspecting officer on demand.

xi) The execution of approved modified Mining Plan shall be subjected to vacation of prohibitory orders/notices, if any.

xii) A yearly report should be submitted before 1st July of every year setting forth the extent of protective and rehabilitative works carried out as envisaged in the approved Mine Closure Plan after starting of Mining Operations.

xiii) A yearly self appraisal note should be submitted before 1st July of every year by the owner of the mine as per enclosed format about extent of implementation of Approved Mining Plan during the preceding financial year with supporting plans/sections, representative photographs in hard as well as soft copy.

xiv) In case the mining lease falls within a radius of 10 kms of National Park/sanctuary, recommendations of NBWL have to be obtained as per the Order of Hon'ble Supreme Court in I.A. No. 460/2004.

xv) The provision of Circular No. 2/2010 of Chief Controller of Mines, Indian Bureau of Mines, Nagpur issued vide letter no. N-11013/3/MP/90-CCOM VOL.VII dated 06.04.2010 shall be complied within a period of 180 days of approval of the document failing which the approval shall be deemed to have withdrawn.

xvi) The lessee shall undertake mining operation only after taking permission from Competent Authority for use of explosive at your mine site for which the explosive licence for the purpose to possess and to use in a magazine is enclosed by you in the document.

xvii) The validity period of the financial assurance should be renewed before the expiry of the same and should be submitted to this office.

xviii) This department does not undertake any responsibility regarding fixing of boundary pillars on the ground and correctness of the boundaries of the lease area shown on the ground with reference to lease map and other plans furnished by the applicant/lessee.

ix) Any liability/penalty, imposed by the State Govt. for difference in quantity of ores removed from the mine (based on volume measurement of pit) versus reported dispatches/production will be settled by lessee as per rules under intimation to this office.

Continued on page 3

xx) The document is approved for proposals contained therein and as applicable from the date of approval of the document for the mining activities to be carried out within the mining leasehold for remaining period of five year block.

xxi) This department does not approve any proposal of dumping of the material or waste outside the lease area. Any proposal of such nature requires written permission from the State/Central Government authorities including Revenue/Forest/ Pollution Control Board and Department of Mines and Geology, who have jurisdiction over the subject area.

Yours faithfully,

Encl: Mining Plan containing 84 sheets,
Annexures-20 &Plates-16.

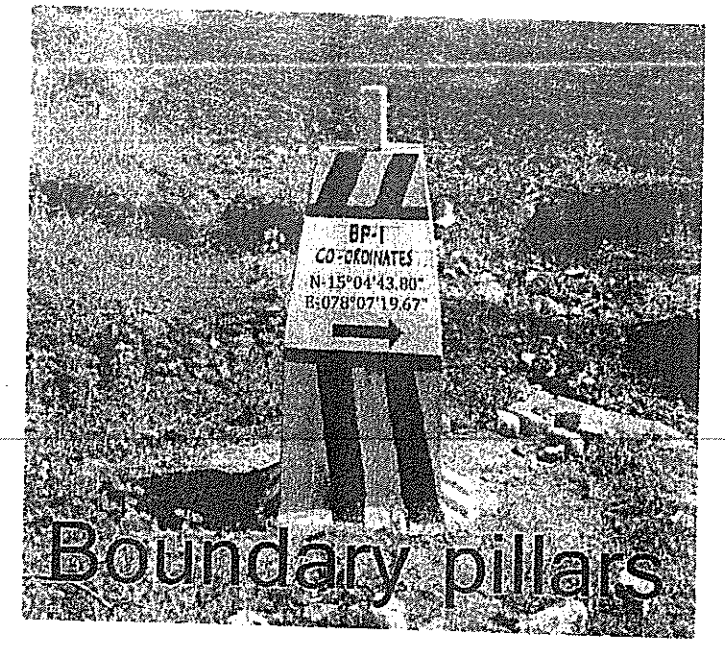
(P.N.Sharma)
Regional Controller of Mines

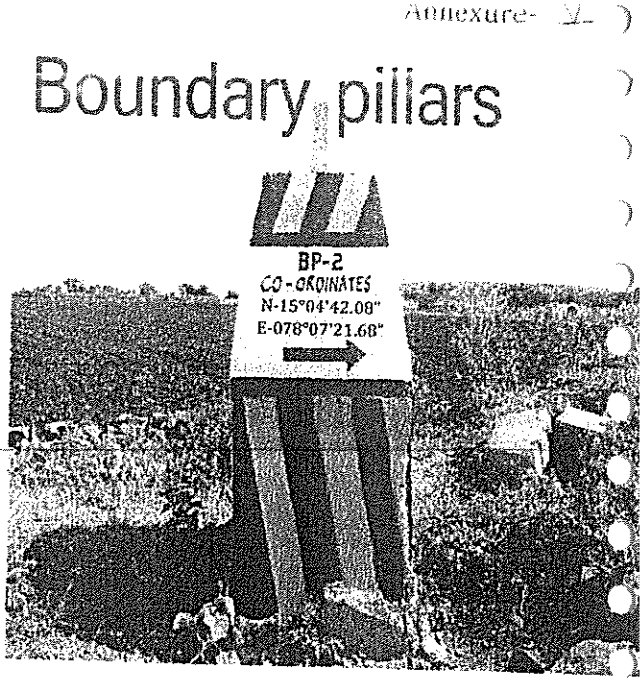
Copy to

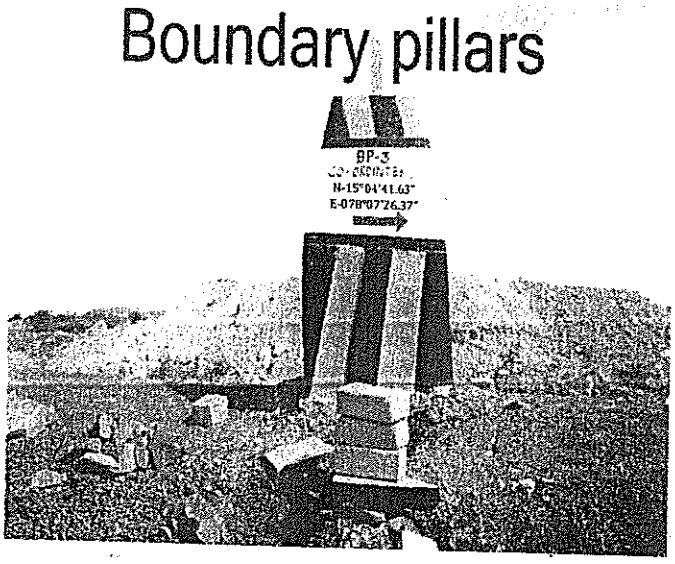
1) The Director of Mines Safety, Bellary Region, 31 Infantry Road, Cantonment ,Bellary-583104 along with a copy of approved Mining Plan.
2) The Director of Mines and Geology, Govt. of Andhra Pradesh, Hyderabad along with a copy approved Mining Plan
3) Sri K.Prabhakara Reddy,RQP, H.no.1-17 Aswini nilaya, JP nagar, 2nd cross, Hosepet-583 201, Bellary district, Karnataka.

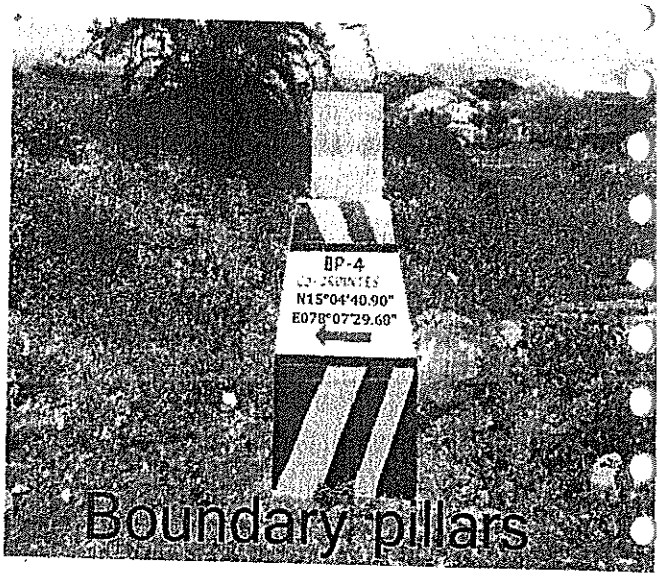
23/04/2018

(P.N.Sharma)
Regional Controller of Mines

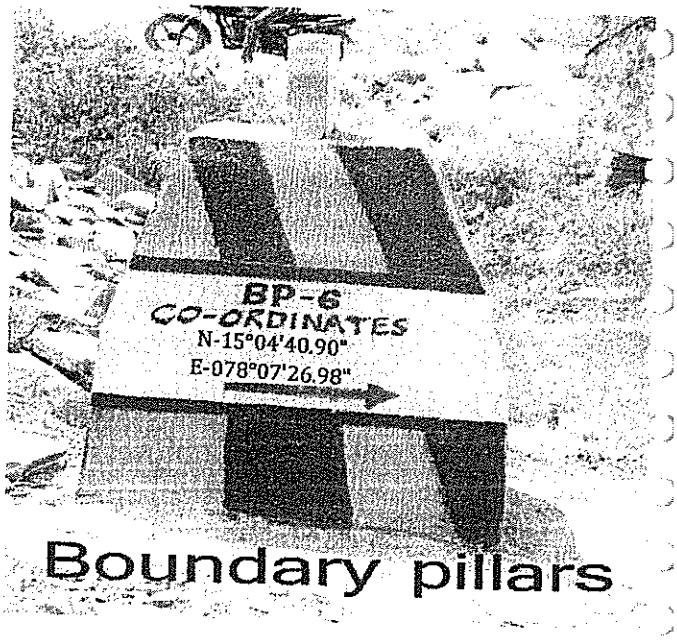

BP-1
CO-ORDINATES
N-15°04'43.80"
E-078°07'19.67"
Boundary pillars


Boundary pillars
BP-2
CO-ORDINATES
N-15°04'42.08"
E-078°07'21.68"


Boundary pillars
BP-3
CO-ORDINATES
N-15°04'41.63"
E-078°07'26.37"


BP-4
CO-ORDINATES
N15°04'40.90"
E078°07'29.68"
Boundary pillars

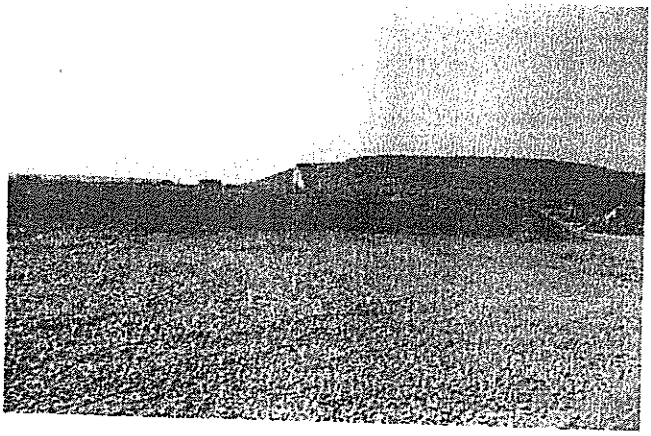

BP-5
CO-ORDINATES
N-15°04'36.70"
E-078°07'29.68"
Boundary pillars


BP-6
CO-ORDINATES
N-15°04'40.90"
E-078°07'26.98"
Boundary pillars

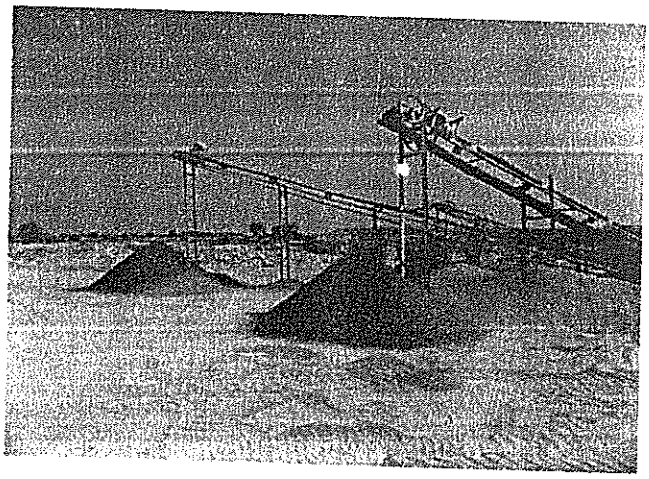
Buffer zone plantation

panoramic view of water harvesting

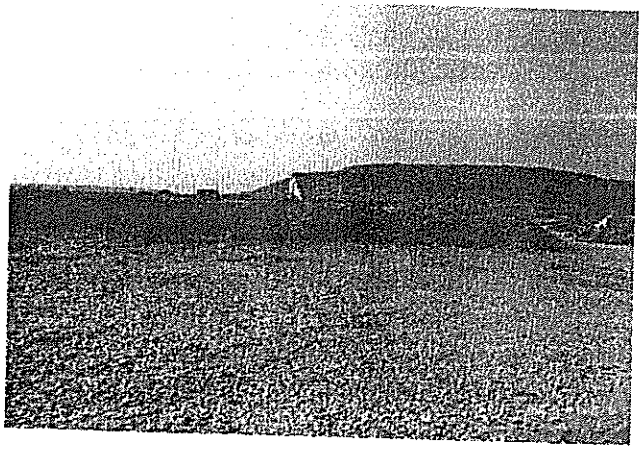
Panoramic view of the pit



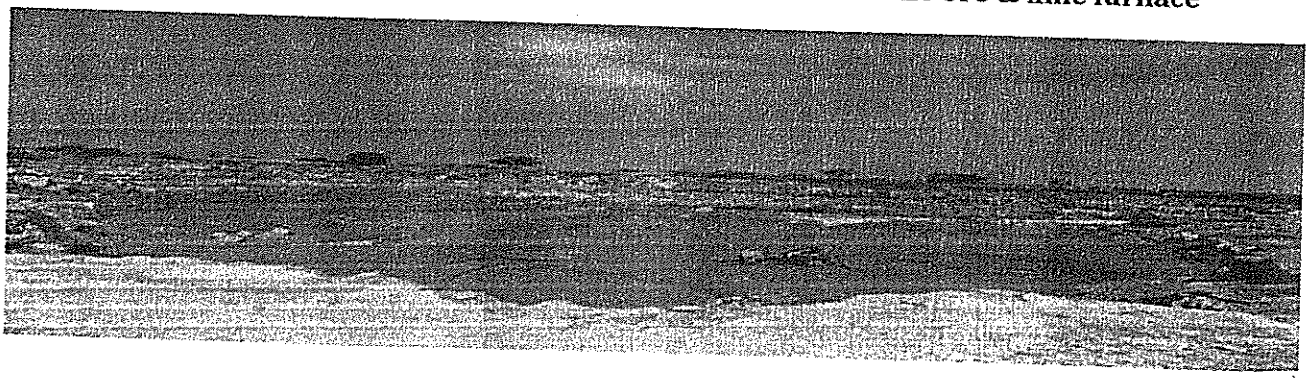
The photo showing the crushed material



The photo showing the Crushing & screening



The photo showing the segregation of the sizes of the ore & lime furnace



ANNEXURE- V

FORM NO: 021100423

ACKNOWLEDGEMENT

"PART-I"

M/s SRI SAINATH MINERALS HAS FILED MEMORANDUM

EXPRESSING ITS INTENT TO SETUP A **MANUFACTURING** ENTERPRISE AT THE ADDRESS Survey / Plot No :

SY.NO: 195/4A-2A, 195/4A-2B, 195/4A-3A, Kolimigundla (Village), (Town),Kolimigundla (Mandal),Kurnool (District),ANDHRAPRADESH state.

FOR THE ITEM / ITEMS INDICATED BELOW AND THE ACTIVITY IS PROPOSED TO COMMENCE FROM

THE (DATE) Apr/2011 AS STATED IN FORM NO 021100423 AND ALLOCATED

ENTREPRENEUR'S MEMORANDUM NO AS BELOW :

DETAILS OF ITEM / ITEMS TO BE MANUFACTURED / SERVICE TO BE PROVIDED.

Sl. No.	Items of Manufacture / type of service to be rendered	Capacity in case of manufacture	
		Qty	Units
1	Stone, Crushed	1,500.00	LOADS

(ADD ADDITIONAL SHEET IF RREQUIRED)

NOTE: THE ISSUE OF THIS ACKNOWLEDGEMENT DOES NOT BESTOW ANY LEGAL RIGHT. THE ENTERPRISE IS REQUIRED TO SEEK REQUISITE CLEARANCE / LICENCE / PERMIT REQUIRED UNDER STATUTORY OBLIGATION STIPULATED UNDER THE LAWS OF CENTRAL GOVERNMENT / STATE GOVERNMENT / UT ADMINISTRATIONS / COURT ORDERS.

DATE OF ISSUE: 24-Nov-2010

NATURE OF ACTIVITY (MANUFACTURING-1, SERVICES-2): 1

CATEGORY OF THE ENTERPRISE (MICRO-1, SMALL-2, MEDIUM-3): 1

ENTERPRENUERS' MEMORANDUM NUMBER: 2 8 0 2 1 1 1 0 2 7 7 7 **PART - I**

[First two boxes are for State / Union Territory code, next threes boxes are for District code, sixth and seventh boxes are for category of enterprise (sixth box for indicating manufacturing or service and seventh box for indicating micro or small or medium) and last five boxes are for Enterprenuers Memorandum number]

This acknowledgement is valid for a period of two years from the date of issue.

DATE : 24-Nov-2010

PLACE: Kurnool.

SIGNATURE
WITH OFFICE SEAL
GENERAL MANAGER
District Industries Centre
B. Camp, KURNOOL.

FORM NO: 021100423 Date of Online Filing : 16 Nov 2010

ENTREPRENEURS MEMORANDUM FOR SETTING UP MICRO,SMALL OR MEDIUM ENTERPRISE

PART-I

1. NAME OF APPLICANT

SURNAME	P.
MIDDLE NAME	
LASTNAME	BAYAPU REDDY

2.

(a) ADDRESS OF COMMUNICATION

S/O NARASIMHA REDDY,-,KOLIMIGUNDLA,KOLIMIGUNDLA,KURNOOL,ANDHRA PRADESH,

(i) TELEPHONE NUMBER	
(ii) FAX NUMBER	
(iii) CELL PHONE NUMBER	9441029046
(iv) E-MAIL	
(v) WEB-SITE	

(b) PERMANENT RESIDENTIAL ADDRESS (MAIN APPLICANT)

S/O NARASIMHA REDDY,-,KOLIMIGUNDLA,KOLIMIGUNDLA,KURNOOL,ANDHRA PRADESH,

(i) TELEPHONE NUMBER	
(ii) FAX NUMBER	
(iii) CELL PHONE NUMBER	9441029046
(iv) E-MAIL	

3. NAME OF PROPOSED ENTERPRISE (if decided)

SRI SAINATH MINERALS

4. PROPOSED LOCATION OF ENTERPRISE

(i) VILLAGE / TOWN / MUNCIPALITY	Kolimigundla	SURVEY / PLOT NO
CODE	02559500	SY.NO: 195/4A-2A, 195/4A-2B, 195/4A-3A.
(ii) TEHSIL / TALUK / MANDAL	Kolimigundla	
CODE	0052	
(iii) DISTRICT	Kurnool	
CODE	021	
(iv) STATE	ANDHRAPRADESH	
CODE	28	
(v) PIN CODE		
(vi) AREA (RURAL-1, URBAN-2)		1

5. CATEGORY OF ENTERPRISE (MICRO-1, SMALL-2, MEDIUM-3) 1

FORM NO: 9.21104423 Date of Online Filing : 16 Nov 2010

5 NATURE OF ACTIVITY
(i) MANUFACTURE [Y]
(ii) SERVICE [ ]

7 NATURE OF OPERATION (Perennial-1, Seasonal-2, Casual-3) [1]

8. WHETHER THE UNIT WILL BE AN ANCILLARY (Yes-1, No-2) [2]

9. PROPOSED SCHEDULE OF INSTALLATION OF PLANT AND MACHINERY(MM/YYYY) [Apr/2011] (MM/YYYY)

10. TYPE OF ORGANIZATION (PROPRIETARY-1, HINDU UNDIVIDED FAMILY-2, PARTNERSHIP-3, CO-OPERATIVE-4, PRIVATE LIMITED COMPANY-5, PUBLIC LIMITED COMPANY-6, SELF-HELP GROUP-7, OTHERS-8) [1]

11. (a) MAIN MANUFACTURING / SERVICE ACTIVITY

NAME: Operation of sand or gravel pits, basalt / porphyry, clay (ordinary), crushing and breaking of stone for use as a flux or raw material in lime or cement manufacture or as building material, road metal or ballast and other materials for construction.

CODE(NIC 2004*): 14106

(b) PRODUCTS TO BE MANUFACTURED / SERVICE TO BE PROVIDED

1 NAME: Stone, Crushed

CODE(ASICC 2000*): 21151

(*) Codes for activities and products / services as per classification specified from time to time by the office of the Development Commissioner (Small Scale Industries), to be filled in by District Industries Centre or the office where the Entrepreneurs' Memorandum is to be submitted.

12.
(a) PROPOSED INVESTMENT IN FIXED ASSETS (Rupees in lakh)

(i) LAND (OWNED-01/RENTED-02/LEASED-03) [0][1]
APPROXIMATE VALUE * [1.00]

(ii) BUILDING (OWNED-01/RENTED-02/LEASED-03) [0][1]
APPROXIMATE VALUE * [2.00]

(iii) PLANT AND MACHINERY VALUE* [15.00]
(In case of manufacturing enterprise)

(iv) EQUIPMENT VALUE* [0.00]
(In case of service enterprise)

(v) FOREIGN EQUITY, IF ANY VALUE* [0.00]

13. INSTALLED CAPACITY (proposed) PER ANNUM

(i) PLANT A

SNo	PRODUCT NAME	QUANTITY	UNITS
1	Stone, Crushed	1,500.00	LOADS

(ii) PLANT B

SNo	PRODUCT NAME	QUANTITY	UNITS

14. POWER LOAD (ANTICIPATED) H.P / K.W.

QTY	UNIT
74.00	HP

15. (a) (i) OTHER SOURCE OF ENERGY / POWER

[IF REQUIRED]
(NO POWER NEEDED-1, COAL-2, OIL-3, LIQUID PETROLIUM GAS-4, ELECTRICITY FROM GRID-5, ELECTRICITY FROM GENERATOR-6, NON-CONVENTIONAL ENERGY-7, TRADITIONAL ENERGY/FIREWOOD-8)

(ii) If no power required, specify reasons;

(b) INDICATE ANNUAL REQUIREMENT

SNo.	SOURCE OF ENERGY	QTY	UNIT

16. EXPECTED EMPLOYMENT (No.s)

(i) MANAGEMENT & OFFICE STAFF	1
(ii) SUPERVISORY	1
(iii) WORKERS	15

17. ENTREPRENEUR'S PROFILE (OF ALL PARTNERS / DIRECTORS OF THE ORGANISATION-USE SEPARATE SHEETS, IF NEEDED)

(a) NAME: P. BAYAPU REDDY

(i) MALE (M) / FEMALE (F): M

(ii) SC(1) / ST(2) / OBC(3) / OTHERS(4) / PHYSICALLY CHALLENGED(5): 4

(iii) KNOWLEDGE LEVEL
[TECHNICAL GRADUATE-1, MANAGEMENT GRADUATE-2, POST GRADUATE-3, OTHER GRADUATE-4, UNDER-GRADUATE-5, ANY OTHER LOWER-6]: 4

(iv) EQUITY PARTICIPATION (In Lakhs): 18.00

(Percentage of total equity): 100.00 %

(v) STAKE IN OTHER MANUFACTURING ENTERPRISES: 2

(Yes-1, No-2)

FORM NO: 021100423 Date of Online Filing 16 Nov 2010

(DD/MM/YYYY)

18. EXPECTED SCHEDULE OF COMMENCEMENT OF PRODUCTION / ACTIVITY 15/04/2011

DATE :

PLACE :

P. Bayapu Reddy

[SIGNATURE OF THE APPLICANT/AUTHORISED PERSON]

NAME OF THE PROPRIETOR/PARTNER/MANAGING DIRECTOR

(a) Enclose a self-certified copy of power of Attorney/Board Resolution/Society Resolution, wherever applicable, while signing as Partner/Managing Director or Authorised Person.

(b) Enclose a certified/notarized copy of the Partnership Deed/Memorandum of Association/Articles of Association in case of Medium Enterprises.

Undertaking

This is to certify that the information furnished in the memorandum in Form No. **021100423** is true and correct to the best of my knowledge and belief.

DATE :

PLACE :

P. Bayapu Reddy

[SIGNATURE OF THE APPLICANT / AUTHORISED PERSON]

FORM NO: 021100423

Date of Online Filing : 16 Nov 2010

LETTER "EM PART-I"

Sir/Madam

You have successfully filed an on-line application for Entrepreneur Memorandum part-I for registration of your Micro/Small/Medium scale unit. You may kindly print the on-line application (3 copies) and send the signed copies of application along with required attachments as indicated below

a) Enclose a self-certified copy of Power of Attorney / Board Resolution / Society Resolution, wherever applicable, while signing as Partner / Managing Director of Authorised Person.

b) Enclose a certified/notarized copy of the Partnership Deed / Memorandum of association / Articles of Association in case of Medium Enterprises.

You may kindly note that your on-line filed application will be processed only after receipt of signed copies of application (3 copies) along with required attachments in the concerned GM, DIC office.

You are requested to send the signed copies of on-line filed application within 30 days.

Thanking you.

General Manager,
District Industries Centre,
B-Camp,
Kurnool.
eMail: gm_dic_krnl@ap.gov.in
Phone No: 08518 - 233598

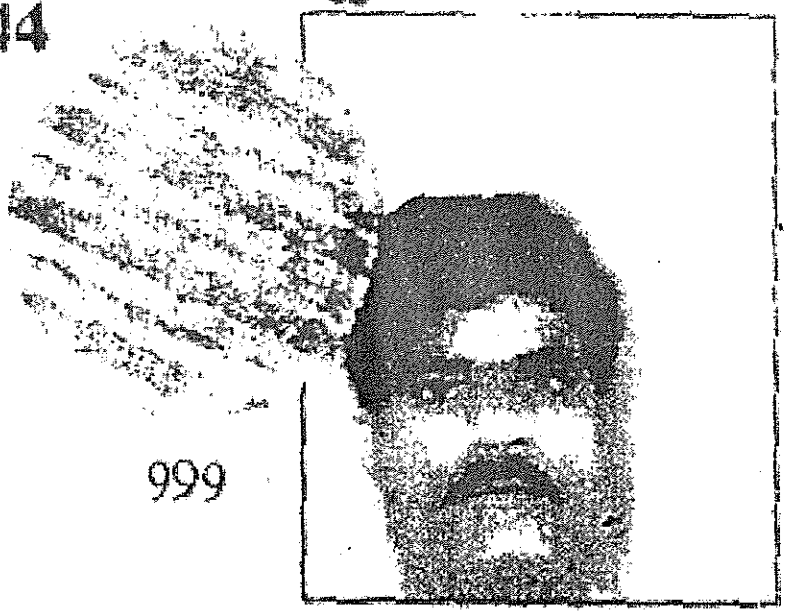
To,

Name	:	P. BAYAPU REDDY,
Door No	:	S/O NARASIMHA REDDY
Street	:	-
Village / Town	:	KOLIMIGUNDLA,
Mandal	:	KOLIMIGUNDLA
District	:	KURNOOL
State	:	ANDHRA PRADESH
Pincode	:	

ANNEXURE-VII

Election Commission Of India
భారత ఎన్నికల సంఘము
IDENTITY CARD
గుర్తింపు కార్డు

AP/27/182/078444



999

Elector's Name : Bayapureddy
ఓటరు పేరు : బయపురెడ్డి
Father's/Mother's/
Husband's Name : Narasimhareddy
తండ్రి/తల్లి/భర్త పేరు : నరసింహారెడ్డి
Sex : M స్త్రీ/పు : పు
Age as on 1.1.1995
1.1.1995 నాటికి వయస్సు : 34

Address / చిరునామా:

4-76\1
Kolimigundla
Kolimigundla

4-76\1
కొలిమిగుండ్ల
కొలిమిగుండ్ల

Electoral Registration Officer
ఓటరు రిజిస్ట్రేషన్ అధికారి

Koilakuntla Assembly Constituency
కోయిలకుంట్ల విధానసభ నియోజక వర్గము

Place/ స్థలము : **Nandyal/నంద్యాల**

Date/ తేది : **15.12.1995**

This card may be used as an Identity Card under different Government Schemes.
ఈ కార్డును వివిధ ప్రభుత్వ పథకములలో గుర్తింపు కార్డుగా ఉపయోగించవచ్చును.

MPIC No: 13/46/00/008/00677/02

96GREM4037 M37-E-B1-GR-5725

ಬೆಂಗಳೂರು ವಿಶ್ವವಿದ್ಯಾಲಯ

Bangalore University

ಬೆಂಗಳೂರು ವಿಶ್ವವಿದ್ಯಾಲಯದ ಕುಲಾಧಿಪತಿ, ಸಹಕುಲಾಧಿಪತಿ

We, the Chancellor, the Pro-Chancellor, the Vice-Chancellor

ಕುಲಪತಿ, ಸಿಂಡಿಕೇಟ್ ಮತ್ತು ವಿದ್ಯಾವಿಷಯಕ ಪರಿಷತ್ತಿನ ಸದಸ್ಯರಾದ ನಾವು

the members of the Syndicate & Academic Council

Certify that

Prabhakara Reddy. K ಅವರು

ಯಥಾಯೋಗ್ಯವಾಗಿ ಈಗಾಗಲೇ ಪ್ರವೇಶ ಪಡೆದಿರುವರೆಂದು ದೃಢೀಕರಿಸುತ್ತಾ

has been duly admitted to the Degree of

ಬ್ಯಾಚುಲರ್ ಆಫ್ ಇಂಜಿನಿಯರಿಂಗ್

Bachelor of Engineering

ಪದವಿಗೆ ಅಗತ್ಯವಾದ ಅರ್ಹತೆಗಳನ್ನು ಪೂರೈಸಿದ್ದು ಪರಿಗಣನೆಯಾಗಿರುವ ಕಾರಣ

in recognition of the fulfilment of requirements

ಮೇಲೆ ಕಾಣಿಸಿದ ಪದವಿಗೆ ಅವಶ್ಯವಿರುವಂಗೀಕರಿಸಲಾಗಿದೆ. ಈ ಪದವಿಯ ವಿವರಗಳು ಹೀಗಿವೆ

for the said degree as indicated below

ಪರೀಕ್ಷೆಯ ವರ್ಷ: *September 2001*

Year of Examination:

ಅಧ್ಯಯನದ ವಿಷಯ: *Mining Engg.*

Subjects:

ಪಡೆದ ವರ್ಗ: *First with Distinction*

Class:

ವಿಶ್ವವಿದ್ಯಾಲಯದ ಅಧಿಕಾರ ಮುದ್ರೆಯೊಡನೆ ನೀಡಲಾಗಿದೆ

Given under the seal of the University

ಬೆಂಗಳೂರು
Bangalore:

ದಿನಾಂಕ
Date: 10.07.2002

ಕುಲಪತಿ
Vice Chancellor

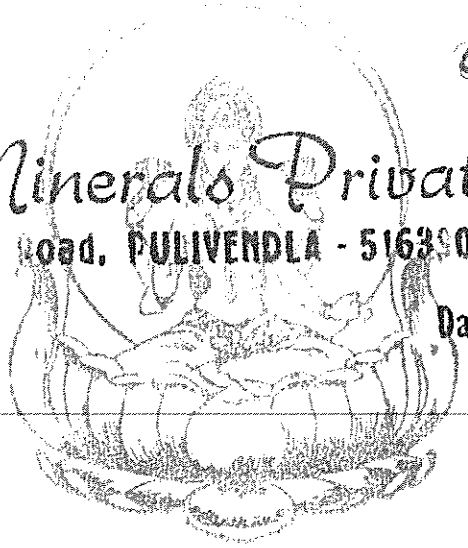
APGST. No CTR/07/3/1693
CST. No. CTR/07/3/1338

Resi : 227522, 226480
Mine : 233131
Office : 226243

Padma Minerals Private Limited,

1/5A, Ambakapalli Road, PULIVENDLA - 516390. Kadapa Dist A.P.

Date 16-11-07



CERTIFICATE

TO WHOM SO EVER IT MAY CONERN

This is to certify that Sri K. Prabhakara Reddy S/o. Sri K.Narayana Reddy worked from 10-11-2001 To 16-11-05 in our Saraswathi Asbestos Mine,M/s. Padma Minerals (P) Ltd as a IInd Class Mines Manager and involved in preparation of plans, Sections, Mining plans, Grade Controling, Reserves Estimation Etc.

Managing Director

(Y.S.PRAKASH REDDY)

S B MINERALS
MINE OWNERS
P.B. No. 58, K R Road, HOSPET - 583 201. (Bellary District, Karnataka)
Grams : BALAJI, HOSPET.

Ref. _____ Date : _____

Date: 01.09.2007

To Whom So Ever It May Concern

This is to certify that Mr. K. Prabhakara Reddy is working here as Mines Manager in this organization with effect from 20.04.2006 to 02.02.2007 in Vyasanakere Iron ore mine (ML No 2515) and from 05.02.2007 to still continuing in Jaisinghpur Iron ore mine (ML No 2550) of M/s S.B.Minerals

He is holding the responsibility of Exploration, Reserve estimation preparation of the geological plans / sections / slice plans / surface and working plan / land use plan / environment and reclamation plan and the mining scheme and related works of mines for our S.B.Minerals Group of Mines.

He is also responsible for the sampling and quality control in mines for production of quality ore.

For M/s S.B.Minerals

S. B. Jayaraj (Mr.)

Partner

खनन योजना तैयार करने के लिए अर्हता प्राप्त व्यक्ति के रूप में मान्यता

प्रपत्र-सी

CERTIFICATE OF RECOGNITION AS QUALIFIED PERSON TO PREPARE MINING PLANS

खनिज रियायत नियमावली 1960 के नियम 22 सी के अन्तर्गत

(Under Rule 22 C of Mineral Concession Rules 1960)

श्री के. नारायण रेड्डी का पुत्र श्री के. प्रभाकर रेड्डी.

Sri K. Prabhakara Reddy, S/o Sri K. Narayana Reddy

एस.वी.के. मिनरल्स, नं. 275, 4 क्रास, बसवेशवरा एक्सटेंशन, होस्पेट - 583 201,

जिला - बेल्लारी, कर्नाटक राज्य

C/o S.V.K. Minerals, Door No. 275, 4th Cross, Basaveesvara Extension, Hospet - 583 201, District- Bellary, Karnataka state.

को उनकी योग्यताओं तथा अनुभवों के संतोषजनक प्रमाण देने के एवज में एतदद्वारा खनिज

having given satisfactory evidence of his qualifications and experience is hereby

रियायत नियमावली, 1960 के नियम 22 सी के अन्तर्गत खनन योजनाएँ तैयार करने के लिए

granted recognition under Rule 22 C of the Mineral Concession Rule, 1960 as a

अर्हता प्राप्त व्यक्ति के रूप में मान्यता दी जाती है।

qualified person to prepare Mining Plans.

उनका पंजीकरण क्रमांक
His Registration No. is

आरक्यूपी/बेंगलूर/258/2008/ए ROP/BNG/258/2008/A

यह मान्यता दस वर्ष की अवधि के लिए वैध है जो कि दिनांक 24.02.2018 को समाप्त होगी.

This recognition is valid for a period of ten years ending 24.02.2018.

(इवान खेस / Ivan Khess)
क्षेत्रीय खान नियंत्रक
Regional Controller of Mines
भारतीय खान ब्यूरो
Indian Bureau of Mines

स्थान / Place : बेंगलूर/Bangalore
दिनांक / Date : 25/02/2008

क्षेत्रीय खान नियंत्रक
Regional Controller of Mines
भारतीय खान ब्यूरो
Indian Bureau of Mines
बेंगलूर Bangalore-560022

Report Issued Date: 19.10.2016 SUMS/TF/30/01

Test Report

1	Name of The Address of Customer	:	Kolimigundla Limestone Mine, M/s. Sainath Minerals, Kolimigundla (V) & (M) Kurnool (Dist), Andhra Pradesh.
2	Customer Reference (Post/Courier/Personal)	:	Personally Handed Over On 08.10.2016
3	Sample Receipt Date	:	08.10.2016
4	Sample Description	:	Limestone (Working Pit)
5	Condition of Sample	:	Sample Received in Polythene Bag
6	Date of Analysis Taken	:	13.10.2016
7	Environmental Condition	:	-
8	Sampling Method	:	N.A.

ANALYSIS RESULTS

S.No.	Sample Code	CaO% IS:1760 (Part3)1991 (Reaffirmed 2006)	MgO% IS:1760 (Part 3)1991 (Reaffirmed 2006)	SiO_2% IS:1760 (Part2)1991 (Reaffirmed 2006)
1	SUMS/NLM/512/0-0.5m	24.67	6.67	27.98
2	SUMS/NLM/513/0.5-1.0m	38.13	4.35	19.62
3	SUMS/NLM/514/1.0-2.0m	46.43	1.77	12.8
4	SUMS/NLM/515/2.0-3.0m	46.65	0.96	9.80
5	SUMS/NLM/516/3.0-4.0m	47.33	0.32	9.32
6	SUMS/NLM/517/4.0-5.0m	46.20	1.12	10.40
7	SUMS/NLM/518/5.0-6.0m	39.68	1.28	16.45
8	SUMS/NLM/519/6.0-7.0m	41.49	1.61	10.56
9	SUMS/NLM/520/7.0-8.0m	43.74	2.09	9.68
10	SUMS/NLM/521/8.0-9.0m	47.38	1.64	5.39
11	SUMS/NLM/522/9.0-10.0m	48.61	2.19	5.40
12	SUMS/NLM/523/10.0-11.3m	49.72	3.38	3.24

Result on Dry Basis**

ANALYSED BY

AUTHORISED SIGNATURE

SAI UNIVERSAL MINING SERVICES

See Note

Head Office : Plot No 15-DP2, KIADB, Sanklapura Indl. Area, Near Water Tank, Bellary Main Road, Hosapete– 583201, Bellary District, Karnataka Cell no: +91 94498 15560, +91 8884494244/261,243,251,260, Ph.: 08394-265084, email: sums.hpt@gmail.com, sumslaboratory@gmail.com, kpr@sums.org.in, Website: www.sums.org.in
Branch Office: Maakrupa Apartment, 2nd floor, H No, 201, Near Baldwin School, Nagarabhavi Road, Kalyan Nagar, Bangaluru-560 0272.
Branch Office: Sai Nilayam Dargaveedi, Brahmanapalli Road, Pulivendula (M) – 516390, Y.S.R (District) (Kadapa). Andhra Pradesh.

FORM-K

ANNEXURE-IV

Ore	Limestone	Address		M/s. Sainath Minerals, Kolimigundla (V) & (M) Kurnool Dist), Andhra Pradesh.
Name of the Mine	Kolimigundla Limestone Mine	Location	Latitude:	N15°04'35.932" to N15°04'40.403"
			Longitude:	E072°07'22.087"to E072°07'28.552"
Type of Exploration	Working Pit	Pit Details		136 X 196 X 11.3
Purpose of Exploration	To prove the Reserves as per MEMC Rules	Depth of the Pit		11.3m (261.4 250.1)
		Total Expenditure		--

Sl.No.	Meterage (m)		Run in m.	Sample No.	Lithology	Analysis Details (Major Radicals)		
	From	To				CaO%	MgO%	SiO_2%
1	0	0.5	0.5	489		24.67	6.67	27.98
2	0.5	1	0.5	490		38.13	4.35	19.62
3	1	2	1	491		46.43	1.77	12.8
4	2	3	1	492		46.65	0.96	9.80
5	3	4	1	493		47.33	0.32	9.32
6	4	5	1	494		46.20	1.12	10.40
7	5	6	1	495		39.68	1.28	16.45
8	6	7	1	496		41.49	1.61	10.56
9	7	8	1	497		43.74	2.09	9.68
10	8	9	1	498		47.38	1.64	5.39
11	9	10	1	499		48.61	2.19	5.40
12	10	11.3	1.3	500		49.72	3.38	3.24

INDEX	
	Soil
	Limestone

Place: Hosapete
Date: 13.10.2016

Signature
Designation: Owner/Agent/Mining Engineer/Geologist/Manager
Name in full: G. Rambabu

Date: 08.09.2016

To,
The Regional Controller of Mines,
Indian Bureau of Mines,
Room No. 603, 6th Floor,
Kavadiguda, Secunderabad – 500 080.

Dear Sir,

Sub: Submission of Form-J for the prospecting by DTH Drilling in respect of Kolimigundla Limestone Mine, over an extent of 4.048Ha situated in Sy.No. 195/4A2A, 195/4A2B, 195/4A3A, Kolimigundla Village & Mandal, Kurnool District, Andhra Pradesh.

With reference to the above subject we are herewith submitting the Form-J copy for the intimation of starting of prospecting operation by the method of DTH drilling in respect of Kolimigundla Limestone Mine, over an extent of 4.048Ha situated in Sy.No. 195/4A2A, 195/4A2B, 195/4A3A, Kolimigundla Village & Mandal, Kurnool District, Andhra Pradesh.

This is for your kind information.

Thanking you
Yours faithfully

For M/s. Sri Sainath Minerals
For : Sri Sainath Minerals
P. Bayapu Reddy
Proprietor

Sri. P. Bayapu Reddy
Proprietor

FORM - J
(NOTICE OF SINKING SHAFTS AND BOREHOLES)
(See Rule 47)

Mine Code .....

IMPORTANT
Notice in this form shall be sent to the concerned authorities within fifteen days of the commencement of sinking shafts/boreholes.

To
1. The Controller General Indian Bureau of Mines, Nagpur – 440001.
2. The Controller of Mines, Indian Bureau of Mines..... PIN.
3. The Regional Control of Mines, Indian Bureau of Mines.....PIN.
4. State Government Concerned.

1. Name of prospect/mine and minerals worked/prospected.
Kolimigundla Limestone Mine & ~~limestone~~.

2. Name and address of licensee/lessee: M/s. Sri Sainath Minerals,
Proprietor Sri. P. Bayapu Reddy,
Kolimigundla Village & Mandal,
Kurnool District, Andhra Pradesh

3. Location
(i) Topo Sheet Number: 57 I/4
(ii) Village: Kolimigundla
(iii) Taluka/Mandal: Kolimigundla
(iv) District: Kurnool
(v) State: Andhra Pradesh

4. **Number of shafts/boreholes intended to be sunk or extended (attach a plan on a scale not less than 1 centimeter = 40 meters indicating the precise location of the shaft/borehole).**
The lessee intends to drill 4 no's of boreholes.

5. **Purpose for which each of the shafts/boreholes is intended to be sunk or extended:**
To prove the extent of ore body as per the UNFC.

6. **Type of shafts(s)/contemplated and its/their dimension(s):** NA.

7. **Type of drill used and size of core to be obtained:** DTH 100mm size.

8. **Intended depth of to which shafts/boreholes is to be extended:** 30m each.

9. **If the shafts/boreholes commonsense from under grounds, the depth of the level at which the shaft/borehole is sunk:** NA.

10. **Name and qualification of the geologist or mining engineer in charge of the operation:**
Ajay D M G N

11. **Date of commencement of proposed shaft sinking/drilling operation:** 08.09.2016

Place: Kolimigundla

For : Sri Sainath Minerals
Signature: P. Bayapu 12.9.16
Name in full:
Designation: Proprietor
Owner/Agent/Mining Engineer/Geologist/Manager

This should be sent to the controller of mines and regional controller of mines in whose territorial jurisdiction the area/mine falls as notified from time to time by the Controller General, Indian Bureau of Mines, under rule 62 of the Mineral conservation and Development Rules, 1988.

ANNEXURE-V

KOLIMIGUNDLA LIMESTONE MINE

C.B.H No.	:	01	North	:	N 15°04'38.69"
Type of Hole:	:	Core Bore Hole	East	:	E 72°07'48.86"
Angle:	:	90°	Collar Level	:	261 m

S. No	Sample Interval		Log	Chemical Analysis				
	From Mtrs	To Mtrs		CaO %	MgO %	SiO_2 %	Al_2O_3 %	Fe_2O_3%
1	0.00	1.00		45.42	3.63	9.68	1.62	0.45
2	1.00	2.00		47.39	3.02	6.20	1.56	0.67
3	2.00	3.00		48.23	2.82	5.41	1.19	1.12
4	3.00	4.00		48.23	3.23	5.61	1.06	0.73
5	4.00	5.00		49.35	2.82	4.12	1.82	0.45
6	5.00	6.00		47.39	3.63	6.34	1.02	0.56
7	6.00	7.00		47.26	2.82	8.78	1.43	0.84
8	7.00	8.00		48.79	3.43	6.44	0.98	1.01
9	8.00	9.00		47.39	3.23	8.82	0.86	0.67
10	9.00	10.00		47.95	3.02	9.61	1.42	0.73
11	10.00	11.00		48.23	3.23	6.54	1.08	0.84
12	11.00	12.00		47.67	3.02	8.11	0.82	0.56
13	12.0	13.00		48.79	3.23	8.17	0.88	0.67
14	13.00	14.00		47.18	3.63	9.26	1.52	0.84
15	14.00	15.00		47.95	3.85	5.24	0.64	0.89
16	15.00	16.00		48.51	3.28	6.28	0.84	1.01
17	16.00	17.00		47.39	3.80	8.22	1.04	0.78
18	17.00	18.00		48.51	3.34	7.00	0.62	0.67
19	18.00	19.00		47.95	3.62	9.98	1.23	0.78
20	19.00	20.00		47.13	3.87	5.74	0.70	1.01
21	20.00	21.00		48.56	3.81	6.30	0.86	0.45
22	21.00	22.00		48.23	3.69	5.37	1.62	0.22
23	22.00	23.00		48.79	3.22	4.28	0.94	0.34
24	23.00	24.00		49.07	3.85	4.34	0.68	0.22
25	24.00	25.00		48.23	3.21	5.82	1.51	0.28
Drill Hole Closed at 25.00 Mtrs.								

INDEX :

	LIMESTONE

KOLIMIGUNDLA LIMESTONE MINE

C.B.H No.	:	02	Northing	:	N 15°04'38.65"
Type of Hole:	:	Core Bore Hole	Easting	:	E 72°07'43.83"
Angle:	:	90°	Collar level	:	261 m

S. No	Sample Interval		Log	Chemical Analysis				
	From Mtrs	To Mtrs		CaO %	MgO %	SiO_2 %	Al_2O_3 %	Fe_2O_3%
1	0.00	1.00		48.28	3.28	8.06	1.02	0.56
2	1.00	2.00		49.35	2.82	5.36	1.08	0.45
3	2.00	3.00		47.39	3.20	9.54	0.86	0.34
4	3.00	4.00		48.23	3.02	8.06	1.54	0.22
5	4.00	5.00		49.07	3.64	6.70	1.42	0.22
6	5.00	6.00		47.67	3.83	10.78	1.06	0.34
7	6.00	7.00		48.23	3.02	6.74	0.86	0.45
8	7.00	8.00		48.79	3.06	9.10	1.04	0.39
9	8.00	9.00		47.39	2.62	10.68	0.92	1.28
10	9.00	10.00		47.11	2.84	8.17	0.46	0.89
11	10.00	11.00		46.55	2.41	12.42	1.08	0.78
12	11.00	12.00		49.07	3.08	6.98	1.64	0.73
13	12.0	13.00		48.23	2.82	8.19	1.02	1.12
14	13.00	14.00		45.99	3.66	11.31	1.36	0.89
15	14.00	15.00		47.11	3.21	8.40	0.84	0.78
16	15.00	16.00		47.95	3.88	8.23	1.06	1.01
17	16.00	17.00		46.27	3.40	12.21	0.86	1.34
18	17.00	18.00		46.55	3.56	14.81	1.25	1.45
19	18.00	19.00		48.51	3.61	8.42	0.62	0.89
20	19.00	20.00		47.67	2.85	6.98	1.42	0.56
21	20.00	21.00		49.07	3.81	4.39	0.68	0.22
22	21.00	22.00		48.23	3.28	6.82	1.51	0.28
23	22.00	23.00		47.95	3.92	6.45	0.64	0.89
24	23.00	24.00		47.39	3.75	8.68	1.02	0.56
25	24.00	25.00		48.23	3.82	7.54	1.08	0.84
Drill Hole Closed at 25.00 Mtrs.								

INDEX :

	LIMESTONE

KOLIMIGUNDLA LIMESTONE MINE

C.B.H No.	:	04	Northing	:	N15°04'35.12"
Type of Hole:	:	Core Bore Hole	Easting	:	E 72°07'49.37"
Angle:	:	90°	Collar level	:	254 m

S. No	Sample Interval		Log	Chemical Analysis				
	From Mtrs	To Mtrs		CaO %	MgO %	SiO_2 %	Al_2O_3 %	Fe_2O_3%
1	0.00	1.00		46.26	3.02	11.30	1.62	0.89
2	1.00	2.00		47.11	2.80	8.37	1.84	0.84
3	2.00	3.00		47.39	3.23	6.23	0.96	0.78
4	3.00	4.00		45.99	2.42	13.39	0.76	0.67
5	4.00	5.00		47.11	3.06	7.82	1.62	1.01
6	5.00	6.00		48.23	2.85	6.21	1.54	0.84
7	6.00	7.00		48.51	2.40	5.18	1.08	0.56
8	7.00	8.00		47.95	2.84	6.39	0.84	1.01
9	8.00	9.00		47.39	2.66	5.68	0.92	1.28
10	9.00	10.00		47.11	2.82	9.17	0.46	0.89
11	10.00	11.00		46.55	2.45	12.42	1.08	0.78
12	11.00	12.00		49.07	3.02	4.98	1.64	0.73
Drill Hole Closed at 12.00 Mtrs.								

INDEX :

	LIMESTONE

KOLIMIGUNDLA LIMESTONE MINE

C.B.H No.	:	03	Northing	:	N 15°04'34.63"
Type of Hole:	:	Core Bore Hole	Easting	:	E 72°07'43.65"
Angle:	:	90°	Collar level	:	260.8 m

S. No	Sample Interval		Log	Chemical Analysis				
	From Mtrs	To Mtrs		CaO %	MgO %	SiO_2 %	Al_2O_3 %	Fe_2O_3%
1	0.00	1.00		46.32	2.68	10.52	1.82	0.84
2	1.00	2.00		47.39	3.02	8.18	0.68	1.01
3	2.00	3.00		46.55	2.49	11.12	1.45	0.67
4	3.00	4.00		49.07	2.82	5.26	0.62	0.89
5	4.00	5.00		48.23	2.46	6.32	0.76	1.06
6	5.00	6.00		47.67	2.64	8.06	0.84	0.89
7	6.00	7.00		49.35	2.88	5.28	1.56	0.82
8	7.00	8.00		48.79	3.43	4.81	1.24	0.78
9	8.00	9.00		48.23	3.02	4.45	1.08	0.73
10	9.00	10.00		47.39	2.40	7.98	0.92	0.67
11	10.00	11.00		49.07	2.82	4.19	0.64	0.89
12	11.00	12.00		48.23	3.23	5.34	1.06	0.67
13	12.0	13.00		48.79	2.45	7.40	1.04	1.01
14	13.00	14.00		47.39	3.43	8.23	1.26	0.89
15	14.00	15.00		48.23	2.02	5.08	0.82	0.78
16	15.00	16.00		47.68	3.68	9.21	0.64	0.84
17	16.00	17.00		47.11	2.20	7.18	0.48	0.65
18	17.00	18.00		48.23	3.02	6.39	1.56	0.78
Drill Hole Closed at 18.00 Mtrs.								

INDEX :

	LIMESTONE

FORM-K

Ore	Limestone	Address	Sy No 195/4A2A, 195/4A2B &195/4A3A(P) Koligundla Village Kolimgundla Mandal, Kurnool Dist.
Name of the Mine	Kolimigundla Limestone Mine	Location	N 15°04'38.69" E 78°07'48.86"
Type of Drill & Size of core	DTH	Bore hole details	No: DTH -01 Angle: 90° Collar Level: 261.4 m
Duration of the Drilling	Starting : 1-10-2016 Ending : 1-10-2016	Depth of hole	30m
Purpose of drilling	To prove the Reserves as per UNFC guideline	Total Expenditure	7500.00

S. No	Sample Interval		Log	Chemical Analysis		
	From Mtrs	To Mtrs		CaO %	MgO %	SiO_2 %
1	0.00	1.00		42.34	2.42	12.58
2	1.00	2.00		43.18	0.81	13.35
3	2.00	3.00		46.55	1.21	9.58
4	3.00	4.00		45.42	1.41	10.50
5	4.00	5.00		47.11	1.21	8.16
6	5.00	6.00		47.95	1.01	8.38
7	6.00	7.00		46.55	1.41	9.38
8	7.00	8.00		47.11	2.62	7.61
9	8.00	9.00		47.95	1.61	7.78
10	9.00	10.00		49.07	1.41	6.86
11	10.00	11.00		48.51	2.02	6.81
12	11.00	12.00		46.83	1.21	9.30
13	12.0	13.00		48.23	0.40	8.71
14	13.00	14.00		47.67	1.21	8.46
15	14.00	15.00		48.79	1.21	8.42
16	15.00	16.00		49.07	1.81	6.46
17	16.00	17.00		47.67	1.01	9.36
18	17.00	18.00		50.47	0.81	6.66
19	18.00	19.00		51.59	1.21	5.06
20	19.00	20.00		48.23	1.61	7.12
21	20.00	21.00		47.95	2.42	6.97
22	21.00	22.00		48.23	2.62	6.49
23	22.00	23.00		46.55	1.61	9.18
24	23.00	24.00		44.86	2.62	9.86
25	24.00	25.00		44.86	2.42	10.06
26	25.00	26.00		48.79	1.61	6.94
27	26.00	27.00		48.23	1.61	7.50
28	27.00	28.00		47.11	2.42	7.81
29	28.00	29.00		46.55	3.23	7.57
30	29.00	30.00		45.99	4.23	6.10

INDEX:

LIMESTONE

Place:
Date:

Signature
Designation: Owner/Agent/Mining Engineer/Geologist/Manager
Name in full: Siddesh

Name of the Mine	Kolimigundla Limeston[illegible]	Location	Kolimigundla Village, Kolimigundla Mandal, Kurnool Dist. N 15°04'35.12" E 78°07'49.37"
Type of Drill & Size of core	DTH	Bore hole details	No: DTH -02 Angle: 90° Collar Level: 261.4 m
Duration of the Drilling	Starting : 2-10-2016 Ending : 2-10-2016	Depth of hole	29m
Purpose of drilling	To prove the Reserves as per UNFC guideline	Total Expenditure	7250.00

S. No	Sample Interval		Log	Chemical Analysis		
	From Mtrs	To Mtrs		CaO %	MgO %	SiO_2 %
1	0.00	1.00		45.42	1.54	12.75
2	1.00	2.00		46.55	0.81	11.69
3	2.00	3.00		45.71	1.41	11.62
4	3.00	4.00		45.14	2.22	10.68
5	4.00	5.00		44.86	3.23	9.09
6	5.00	6.00		45.99	1.81	10.24
7	6.00	7.00		44.58	2.42	11.04
8	7.00	8.00		43.74	3.23	11.07
9	8.00	9.00		44.30	3.43	10.31
10	9.00	10.00		47.67	0.81	10.73
11	10.00	11.00		48.23	1.21	9.50
12	11.00	12.00		49.07	1.36	8.46
13	12.0	13.00		48.23	1.06	10.41
14	13.00	14.00		47.39	2.82	9.03
15	14.00	15.00		49.35	1.24	8.56
16	15.00	16.00		51.59	1.61	6.13
17	16.00	17.00		51.03	1.41	6.60
18	17.00	18.00		49.35	1.21	8.18
19	18.00	19.00		51.59	1.46	5.54
20	19.00	20.00		48.79	1.61	7.26
21	20.00	21.00		47.67	3.02	7.35
22	21.00	22.00		48.23	1.61	7.58
23	22.00	23.00		46.55	1.41	10.08
24	23.00	24.00		47.67	0.60	9.67
25	24.00	25.00		49.35	1.61	7.78
26	25.00	26.00		51.59	1.86	6.13
27	26.00	27.00		48.23	1.61	9.40
28	27.00	28.00		47.11	2.42	9.81
29	28.00	29.00		48.23	1.21	9.84

INDEX:

LIMESTONE

Place:
Date:

Signature
Designation: Owner/Agent/Mining Engineer/Geologist/Manage,
Name in full:

FORM-IV

Ore	Limestone	Address	[illegible] Kolimigundla Village Kolimigundla Mandal, Kurnool Dist.
Name of the Mine	Kolimigundla Limestone Mine	Location	N 15°04'34.63" E 78°07'43.65"
Type of Drill & Size of core	DTH	Bore hole details	No: DTH -04 Angle: 90° Collar Level: 260.0 m
Duration of the Drilling	Starting : 3-10-2016 Ending : 3-10-2016	Depth of hole	23m
Purpose of drilling	To prove the Reserves as per UNFC guideline	Total Expenditure	5750.00

S. No	Sample Interval		Log	Chemical Analysis		
	From Mtrs	To Mtrs		CaO %	MgO %	SiO_2 %
1	0.00	1.00		47.67	1.10	9.63
2	1.00	2.00		52.72	0.40	4.58
3	2.00	3.00		51.59	0.61	5.70
4	3.00	4.00		44.30	1.81	12.99
5	4.00	5.00		47.11	1.61	8.98
6	5.00	6.00		48.23	1.61	7.86
7	6.00	7.00		48.79	0.40	8.51
8	7.00	8.00		47.67	1.24	9.63
9	8.00	9.00		49.07	3.02	5.61
10	9.00	10.00		47.11	3.63	6.96
11	10.00	11.00		45.42	3.43	8.85
12	11.00	12.00		45.99	2.42	9.30
13	12.0	13.00		47.39	0.40	10.11
14	13.00	14.00		46.55	1.01	10.15
15	14.00	15.00		41.50	1.21	14.99
16	15.00	16.00		39.54	1.01	17.16
17	16.00	17.00		45.99	1.21	10.50
18	17.00	18.00		43.74	0.40	13.55
19	18.00	19.00		44.86	2.02	10.82
20	19.00	20.00		42.06	6.05	9.59
21	20.00	21.00		44.86	3.02	9.81
22	21.00	22.00		45.14	3.23	9.33
23	22.00	23.00		44.86	4.03	8.80

INDEX:

LIMESTONE

Place:
Date:

Signature
Designation: Owner/Agent/Mining Engineer/Geologist/Manager
Name in full:

Ore	Limestone	Address	Sy No.195/4A2A, 195/4A2B &195/4A3A(P) Koligundla Village Kolimgundla Mandal, Kurnool Dist.
Name of the Mine	Kolimigundla Limestone Mine	Location	N 15°04'34.63" E 78°07'43.65"
Type of Drill & Size of core	DTH	Bore hole details	No: DTH -03 Angle: 90° Collar Level: 260.0 m
Duration of the Drilling	Starting : 3-10-2016 Ending : 3-10-2016	Depth of hole	26m
Purpose of drilling	To prove the Reserves as per UNFC guideline	Total Expenditure	6500.00

S. No	Sample Interval		Log	Chemical Analysis		
	From Mtrs	To Mtrs		CaO %	MgO %	SiO_2 %
1	0.00	1.00		46.55	2.42	10.14
2	1.00	2.00		47.39	1.41	9.31
3	2.00	3.00		44.86	1.21	13.04
4	3.00	4.00		45.99	2.02	11.11
5	4.00	5.00		47.11	0.40	9.60
6	5.00	6.00		49.35	2.02	8.74
7	6.00	7.00		51.03	1.21	6.87
8	7.00	8.00		47.67	0.40	10.04
9	8.00	9.00		48.51	1.81	8.79
10	9.00	10.00		48.79	0.40	9.92
11	10.00	11.00		44.30	1.01	15.00
12	11.00	12.00		44.02	1.41	14.68
13	12.0	13.00		22.71	0.40	51.49
14	13.00	14.00		23.55	0.81	50.25
15	14.00	15.00		22.99	0.20	51.42
16	15.00	16.00		39.26	0.81	19.97
17	16.00	17.00		41.50	1.01	16.52
18	17.00	18.00		42.06	0.40	14.57
19	18.00	19.00		48.23	2.42	9.38
20	19.00	20.00		47.11	0.81	12.12
21	20.00	21.00		47.39	1.01	11.63
22	21.00	22.00		48.23	2.22	9.58
23	22.00	23.00		43.18	1.21	15.64
24	23.00	24.00		45.14	2.22	12.67
25	24.00	25.00		45.42	0.40	13.20
26	25.00	26.00		44.86	0.60	14.28

INDEX:

LIMESTONE

Place:
Date:

Signature
Designation: Owner/Agent/Mining Engineer/Geologist/Manager
Name in full:

Mineral & Metallurgical Laboratories

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Approved by : DGAQA (Min. of Def.), RITES LTD.

TEST REPORT

Date : 03/12/2012 Recd on : 05/12/2012

Customer Details : M/s. Kolimigundla Limestone Mine
Kolimigundla Village & Mandal
Kurnool (Dt)
Andhra Pradesh

Nature of Sample : Limestone Core Sample (B.H.No.1)

S.No.	Description	Parameters Results				
		CaO %	MgO %	SiO_2%	Al_2O_3%	Fe_2O_3 %
1	CBH Sample/Limestone/0.00 – 1.00mts	45.42	3.63	9.68	1.62	0.45
2	CBH Sample/Limestone/1.00 – 2.00mts	47.39	3.02	6.20	1.56	0.67
3	CBH Sample/Limestone/2.00 – 3.00mts	48.23	2.82	5.41	1.19	1.12
4	CBH Sample/Limestone/3.00 – 4.00mts	48.23	3.23	5.61	1.06	0.73
5	CBH Sample/Limestone/4.00 – 5.00mts	49.35	2.82	4.12	1.82	0.45
6	CBH Sample/Limestone/5.00 – 6.00mts	47.39	3.63	6.34	1.02	0.56
7	CBH Sample/Limestone/6.00 – 7.00mts	47.26	2.82	8.78	1.43	0.84
8	CBH Sample/Limestone/7.00 – 8.00mts	48.79	3.43	6.44	0.98	1.01
9	CBH Sample/Limestone/8.00 – 9.00mts	47.39	3.23	8.82	0.86	0.67
10	CBH Sample/Limestone/9.00 – 10.00mts	47.95	3.02	9.61	1.42	0.73
11	CBH Sample/Limestone/10.00 – 11.00mts	48.23	3.23	6.54	1.08	0.84
12	CBH Sample/Limestone/11.00 – 12.00mts	47.67	3.02	8.11	0.82	0.56
13	CBH Sample/Limestone/12.00 – 13.00mts	48.79	3.23	8.17	0.88	0.67
14	CBH Sample/Limestone/13.00 – 14.00mts	47.18	3.63	9.26	1.52	0.84
15	CBH Sample/Limestone/14.00 – 15.00mts	47.95	3.85	5.24	0.64	0.89
16	CBH Sample/Limestone/15.00 – 16.00mts	48.51	3.28	6.28	0.84	1.01
17	CBH Sample/Limestone/16.00 – 17.00mts	47.39	3.80	8.22	1.04	0.78
18	CBH Sample/Limestone/17.00 – 18.00mts	48.51	3.34	7.00	0.62	0.67
19	CBH Sample/Limestone/18.00 – 19.00mts	47.95	3.62	9.98	1.23	0.78
20	CBH Sample/Limestone/19.00 – 20.00mts	47.13	3.87	5.74	0.70	1.01
21	CBH Sample/Limestone/20.00 – 21.00mts	48.56	3.81	6.30	0.86	0.45
22	CBH Sample/Limestone/21.00 – 22.00mts	48.23	3.69	5.37	1.62	0.22
23	CBH Sample/Limestone/22.00 – 23.00mts	48.79	3.22	4.28	0.94	0.34
24	CBH Sample/Limestone/23.00 – 24.00mts	49.07	3.85	4.34	0.68	0.22
25	CBH Sample/Limestone/24.00 – 25.00mts	48.23	3.21	5.82	1.51	0.28

Verified by
Technical Manager

Authorised Signatory
Quality Manager

22, 1st Floor, HMT Main Road, Divanarapalya (Bus Stop), Bangalore-560 054. Ph : 080-41553163 / 23473887,
Fax : 080-23471182, Mob : 9980071181, 9886126442, 9880201652 E-mail : mmlabs@yahoo.com

Mineral & Metallurgical Laboratories

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Approved by : DGAQA (Min. of Def.), RITES LTD.

TEST REPORT

Date : 08/12/2012 Recd on : 10/12/2012

Customer Details : M/s. Kolimigundla Limestone Mine
Kolimigundla Village & Mandal
Kurnool (Dt)
Andhra Pradesh

Nature of Sample : Limestone Core Sample (B.H.No.2)

S.No.	Description	Parameters Results				
		CaO %	MgO %	SiO_2%	Al_2O_3%	Fe_2O_3%
1	CBH Sample/Limestone/0.00 – 1.00mts	48.26	3.28	8.06	1.02	0.56
2	CBH Sample/Limestone/1.00 – 2.00mts	49.35	2.82	5.36	1.08	0.45
3	CBH Sample/Limestone/2.00 – 3.00mts	47.39	3.20	9.54	0.86	0.34
4	CBH Sample/Limestone/3.00 – 4.00mts	48.23	3.02	8.06	1.54	0.22
5	CBH Sample/Limestone/4.00 – 5.00mts	49.07	3.64	6.70	1.42	0.22
6	CBH Sample/Limestone/5.00 – 6.00mts	47.67	3.83	10.78	1.06	0.34
7	CBH Sample/Limestone/6.00 – 7.00mts	48.23	3.02	6.74	0.86	0.45
8	CBH Sample/Limestone/7.00 – 8.00mts	48.79	3.06	9.10	1.04	0.39
9	CBH Sample/Limestone/8.00 – 9.00mts	47.39	2.62	10.68	0.92	1.28
10	CBH Sample/Limestone/9.00 – 10.00mts	47.11	2.84	8.17	0.46	0.89
11	CBH Sample/Limestone/10.00 – 11.00mts	46.55	2.41	12.42	1.08	0.78
12	CBH Sample/Limestone/11.00 – 12.00mts	49.07	3.08	6.98	1.64	0.73
13	CBH Sample/Limestone/12.00 – 13.00mts	48.23	2.82	8.19	1.02	1.12
14	CBH Sample/Limestone/13.00 – 14.00mts	45.99	3.66	11.31	1.36	0.89
15	CBH Sample/Limestone/14.00 – 15.00mts	47.11	3.21	8.40	0.84	0.78
16	CBH Sample/Limestone/15.00 – 16.00mts	47.95	3.88	8.23	1.06	1.01
17	CBH Sample/Limestone/16.00 – 17.00mts	46.27	3.40	12.21	0.86	1.34
18	CBH Sample/Limestone/17.00 – 18.00mts	46.55	3.56	14.81	1.25	1.45
19	CBH Sample/Limestone/18.00 – 19.00mts	48.51	3.61	8.42	0.62	0.89
20	CBH Sample/Limestone/19.00 – 20.00mts	47.67	2.85	6.98	1.42	0.56
21	CBH Sample/Limestone/20.00 – 21.00mts	49.07	3.81	4.39	0.68	0.22
22	CBH Sample/Limestone/21.00 – 22.00mts	48.23	3.28	6.82	1.51	0.28
23	CBH Sample/Limestone/22.00 – 23.00mts	47.95	3.92	6.45	0.64	0.89
24	CBH Sample/Limestone/23.00 – 24.00mts	47.39	3.75	8.68	1.02	0.56
25	CBH Sample/Limestone/24.00 – 25.00mts	48.23	3.82	7.54	1.08	0.84

Verified by
Technical Manager

Authorised Signatory
Quality Manager

22, 1st Floor, HMT Main Road, Dhenarapalya (Bus Stop), Bangalore-560 054. Ph : 080-41553163 / 23473667.
Fax : 080-23471182, Mob : 9980071181, 9986128442, 9880201652 E-mail : mm.labs@yahoo.com

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Approved by : DGAQA (Min. of Def.), RITES LTD.

TEST REPORT

Date : 12/12/2012 Recd on : 14/12/2012

Customer Details : M/s. Kolimigundla Limestone Mine
Kolimigundla Village & Mandal
Kurnool (Dt)
Andhra Pradesh

Nature of Sample : Limestone Core Sample (B.H.No.3)

S.No.	Description	Parameters Results				
		CaO %	MgO %	SiO_2%	Al_2O_3%	Fe_2O_3 %
1	CBH Sample/Limestone/0.00 – 1.00mts	46.32	2.68	10.52	1.82	0.84
2	CBH Sample/Limestone/1.00 – 2.00mts	47.39	3.02	8.18	0.68	1.01
3	CBH Sample/Limestone/2.00 – 3.00mts	46.55	2.49	11.12	1.45	0.67
4	CBH Sample/Limestone/3.00 – 4.00mts	49.07	2.82	5.26	0.62	0.89
5	CBH Sample/Limestone/4.00 – 5.00mts	48.23	2.46	6.32	0.76	1.06
6	CBH Sample/Limestone/5.00 – 6.00mts	47.67	2.64	8.06	0.84	0.89
7	CBH Sample/Limestone/6.00 – 7.00mts	49.35	2.88	5.28	1.56	0.82
8	CBH Sample/Limestone/7.00 – 8.00mts	48.79	3.43	4.81	1.24	0.78
9	CBH Sample/Limestone/8.00 – 9.00mts	48.23	3.02	4.45	1.08	0.73
10	CBH Sample/Limestone/9.00 – 10.00mts	47.39	2.40	7.98	0.92	0.67
11	CBH Sample/Limestone/10.00 – 11.00mts	49.07	2.82	4.19	0.64	0.89
12	CBH Sample/Limestone/11.00 – 12.00mts	48.23	3.23	5.34	1.06	0.67
13	CBH Sample/Limestone/12.00 – 13.00mts	48.79	2.45	7.40	1.04	1.01
14	CBH Sample/Limestone/13.00 – 14.00mts	47.39	3.43	8.23	1.26	0.89
15	CBH Sample/Limestone/14.00 – 15.00mts	48.23	2.02	5.08	0.82	0.78
16	CBH Sample/Limestone/15.00 – 16.00mts	47.68	3.68	9.21	0.64	0.84
17	CBH Sample/Limestone/16.00 – 17.00mts	47.11	220	7.18	0.48	0.66
18	CBH Sample/Limestone/17.00 – 18.00mts	48.23	3.02	6.39	1.56	0.78

Verified by
Technical Manager

Authorised Signatory
Quality Manager

22, 1st Floor, HMT Main Road, Divanarapalya (Bus Stop), Bangalore-560 054. Ph : 080-41653163 / 23473667.
Fax : 080-23471162, Mob : 9980071181, 9986128442, 9880201662 E-mail : mmlabs@yahoo.com

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TEST REPORT

Date : 16/12/2012 Recd on : 18/12/2012

Customer Details : M/s. Kolimigundla Limestone Mine
Kolimigundla Village & Mandal
Kurnool (Dt)
Andhra Pradesh

Nature of Sample : Limestone Core Sample (B.H.No.4)

S.No.	Description	Parameters Results				
		CaO %	MgO %	SiO_2%	Al_2O_3%	Fe_2O_3%
1	CBH Sample/Limestone/0.00 – 1.00mts	46.26	3.02	11.30	1.62	0.89
2	CBH Sample/Limestone/1.00 – 2.00mts	47.11	2.80	8.37	1.84	0.84
3	CBH Sample/Limestone/2.00 – 3.00mts	47.39	3.23	6.23	0.96	0.78
4	CBH Sample/Limestone/3.00 – 4.00mts	45.99	2.42	13.39	0.76	0.67
5	CBH Sample/Limestone/4.00 – 5.00mts	47.11	3.06	7.82	1.62	1.01
6	CBH Sample/Limestone/5.00 – 6.00mts	48.23	2.85	6.21	1.54	0.84
7	CBH Sample/Limestone/6.00 – 7.00mts	48.51	2.40	5.18	1.08	0.56
8	CBH Sample/Limestone/7.00 – 8.00mts	47.95	2.84	6.39	0.84	1.01
9	CBH Sample/Limestone/8.00 – 9.00mts	47.39	2.66	5.68	0.92	1.28
10	CBH Sample/Limestone/9.00 – 10.00mts	47.11	2.82	9.17	0.46	0.89
11	CBH Sample/Limestone/10.00 – 11.00mts	46.55	2.45	12.42	1.08	0.78
12	CBH Sample/Limestone/11.00 – 12.00mts	49.07	3.02	4.98	1.64	0.73

Verified by
Technical Manager

Authorised Signatory
Quality Manager

22, 1st Floor, HMT Main Road, Divanarapalya (Bus Stop), Bangalore-560 054. Ph : 080-41553163 / 23473667,
Fax : 080-23471182, Mob : 9880071181, 9886128442, 9880201652 E-mail : mmlabs@yahoo.com

ANALYSIS RESULTS

S.No	Sample code	CaO% IS:1760 (Part3)1991 (Reaffirmed 2006)	MgO% IS:1760 (Part 3)1991 (Reaffirmed 2006)	SiO_2% IS:1760 (Part2)1991 (Reaffirmed 2006)
15.	SUMS/SM/418/14.00-15.00m	48.79	1.21	8.42
16.	SUMS/SM/419/15.00-16.00m	49.07	1.81	6.46
17.	SUMS/SM/420/16.00-17.00m	47.67	1.01	9.36
18.	SUMS/SM/421/17.00-18.00m	50.47	0.81	6.66
19.	SUMS/SM/422/18.00-19.00m	51.59	1.21	5.06
20.	SUMS/SM/423/19.00-20.00m	48.23	1.61	7.12
21.	SUMS/SM/424/20.00-21.00m	47.95	2.42	6.97
22.	SUMS/SM/425/21.00-22.00m	48.23	2.62	6.49
23.	SUMS/SM/426/22.00-23.00m	46.55	1.61	9.18
24.	SUMS/SM/427/23.00-24.00m	44.86	2.62	9.86
25.	SUMS/SM/428/24.00-25.00m	44.86	2.42	10.06
26.	SUMS/SM/429/25.00-26.00m	48.79	1.61	6.94
27.	SUMS/SM/430/26.00-27.00m	48.23	1.61	7.50
28.	SUMS/SM/431/27.00-28.00m	47.11	2.42	7.81
29.	SUMS/SM/432/28.00-29.00m	46.55	3.23	7.57
30.	SUMS/SM/433/29.00-30.00m	45.99	4.23	6.10

Result on Dry Basis**

ANALYSED BY

AUTHORISED SIGNATORY

End of the Test Report

Head Office : Plot No 15-DP2, KIADB, Sarklapura Indl. Area, Near Water Tank, Bellary Main Road, Hosapete– 583201, Bellary District, Karnataka Cell no: +91 94498 15560, +91 8884494244/261,243,251,260, Ph.: 08394-265084, email: sums.hpt@gmail.com, sumslaboratory@gmail.com, kpr@sums.org.in, Website: www.sums.org.in
Branch Office: Maakrupa Apartment, 2nd floor, H No, 201, Near Baldwin School, Nagarabhavi Road, Kalyan Nagar, Bangaluru-560 0272.
Branch Office: Sai Nilayam Dargaveedi, Brahmanapalli Road, Pulivendula (M) – 516390, Y.S.R (District) (Kadapa). Andhra Pradesh.

NOTE:

1. The results given in the report pertain only to the samples received or drawn by us.
2. Mineral & Ores sample shall be retained for a maximum period of three month from the date of issue of report.
3. Water samples will be retained 15 days from the date of issue of the Test report.
4. This report is not to be reproduced except in full and cannot be used as evidence in court of law and should not be used in any advertising media without our prior permission in writing.
5. *Marked parameters are Non-NABL Accredited.

SAI UNIVERSAL MINING SERVICES

[Mining, Survey, Geology, Analytical & Environment]

NABL Accredited Laboratory Cert. No. T-2736

ISO 9001:2008
ISO 14001:2004
OHSAS 18001:2007

Issued Date: 19.10.2016 SUMS/TF/30/01

TEST REPORT

1	Name & Address of Customer	:	**Kolimigundla Limestone Mine, M/s. Sainath Minerals, Kolimigundla (V) & (M) Kurnool Dist), Andhrapradesh.**
2	Customer Reference (Post/Courier/Personal)	:	Personally Handed Over On 08.10.2016
3	Sample Receipt Date	:	08.10.2016
4	Sample Description	:	**Limestone DTH-1**
5	Condition of Sample	:	Sample received in Polythene Bag
6	Date of Analysis taken	:	12.10.2016
7	Environmental Condition	:	-
8	Sampling Method	:	N.A

ANALYSIS RESULTS

S.No	Sample code	CaO% IS:1760 (Part3)1991 (Reaffirmed 2006)	MgO% IS:1760 (Part 3)1991 (Reaffirmed 2006)	SiO_2% IS:1760 (Part2)1991 (Reaffirmed 2006)
1.	SUMS/SM/404/0.00-1.00m	42.34	2.42	12.58
2.	SUMS/SM/405/1.00-2.00m	43.18	0.81	13.35
3.	SUMS/SM/406/2.00-3.00m	46.55	1.21	9.58
4.	SUMS/SM/407/3.00-4.00m	45.42	1.41	10.50
5.	SUMS/SM/408/4.00-5.00m	47.11	1.21	8.16
6.	SUMS/SM/409/5.00-6.00m	47.95	1.01	8.38
7	SUMS/SM/410/6.00-7.00m	46.55	1.41	9.38
8.	SUMS/SM/411/7.00-8.00m	47.11	2.62	7.61
9.	SUMS/SM/412/8.00-9.00m	47.95	1.61	7.78
10.	SUMS/SM/413/9.00-10.00m	49.07	1.41	6.86
11.	SUMS/SM/414/10.00-11.00m	48.51	2.02	6.81
12.	SUMS/SM/415/11.00-12.00m	46.83	1.21	9.30
13.	SUMS/SM/416/12.00-13.00m	48.23	0.40	8.71
14.	SUMS/SM/417/13.00-14.00m	47.67	1.21	8.46

Result on Dry Basis**

ANALYSED BY

AUTHORISED SIGNATORY

Date

See Note Cont.....

Head Office : Plot No 15-DP2, KIADB, Sanklapura Indl. Area, Near Water Tank, Bellary Main Road, Hosapete– 583201, Bellary District, Karnataka Cell no: +91 94498 15560, +91 8884494244/261,243,251,260, Ph.: 08394-265084, email: sums.hpt@gmail.com, sumslaboratory@gmail.com, kpr@sums.org.in, Website: www.sums.org.in

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NABL Accredited Laboratory Cert. No. T-2736

ISO 9001:2008
ISO 14001:2004
OHSAS 18001:2007

Issued Date: 19.10.2016 SUMS/TF/30/01

TEST REPORT

1	Name & Address of Customer	:	**Kollmigundla Limestone Mine, M/s. Sainath Minerals, Kolimigundla (V) & (M) Kurnool Dist), Andhrapradesh.**
2	Customer Reference (Post/Courier/Personal)	:	Personally Handed Over On 08.10.2016
3	Sample Receipt Date	:	08.10.2016
4	Sample Description	:	**Limestone DTH-2**
5	Condition of Sample	:	Sample received in Polythene Bag
6	Date of Analysis taken	:	12.10.2016
7	Environmental Condition	:	-
8	Sampling Method	:	N.A

ANALYSIS RESULTS

S.No	Sample code	CaO% IS:1760 (Part3)1991 (Reaffirmed 2006)	MgO% IS:1760 (Part 3)1991 (Reaffirmed 2006)	SiO_2% IS:1760 (Part2)1991 (Reaffirmed 2006)
1.	SUMS/SM/434/0.00-1.00m	45.42	1.54	12.75
2.	SUMS/SM/435/1.00-2.00m	46.55	0.81	11.69
3.	SUMS/SM/436/2.00-3.00m	45.71	1.41	11.62
4.	SUMS/SM/437/3.00-4.00m	45.14	2.22	10.68
5.	SUMS/SM/438/4.00-5.00m	44.86	3.23	9.09
6.	SUMS/SM/439/5.00-6.00m	45.99	1.81	10.24
7	SUMS/SM/440/6.00-7.00m	44.58	2.42	11.04
8.	SUMS/SM/441/7.00-8.00m	43.74	3.23	11.07
9.	SUMS/SM/442/8.00-9.00m	44.30	3.43	10.31
10.	SUMS/SM/443/9.00-10.00m	47.67	0.81	10.73
11.	SUMS/SM/444/10.00-11.00m	48.23	1.21	9.50
12.	SUMS/SM/445/11.00-12.00m	49.07	1.36	8.46
13.	SUMS/SM/446/12.00-13.00m	48.23	1.06	10.41
14.	SUMS/SM/447/13.00-14.00m	47.39	2.82	9.03

Result on Dry Basis**

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ANALYSIS RESULTS

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15.	SUMS/SM/448/14.00-15.00m	49.35	1.24	8.56
16.	SUMS/SM/449/15.00-16.00m	51.59	1.61	6.13
17.	SUMS/SM/450/16.00-17.00m	51.03	1.41	6.60
18.	SUMS/SM/451/17.00-18.00m	49.35	1.21	8.18
19.	SUMS/SM/452/18.00-19.00m	51.59	1.46	5.54
20.	SUMS/SM/453/19.00-20.00m	48.79	1.61	7.26
21.	SUMS/SM/454/20.00-21.00m	47.67	3.02	7.35
22.	SUMS/SM/455/21.00-22.00m	48.23	1.61	7.58
23.	SUMS/SM/456/22.00-23.00m	46.55	1.41	10.08
24.	SUMS/SM/457/23.00-24.00m	47.67	0.60	9.67
25.	SUMS/SM/458/24.00-25.00m	49.35	1.61	7.78
26.	SUMS/SM/459/25.00-26.00m	51.59	1.86	6.13
27.	SUMS/SM/460/26.00-27.00m	48.23	1.61	9.40
28.	SUMS/SM/461/27.00-28.00m	47.11	2.42	9.81
29.	SUMS/SM/462/28.00-29.00m	48.23	1.21	9.84

Result on Dry Basis**

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End of the Test Report

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Issued Date: 19.10.2016 SUMS/TF/30/01

TEST REPORT

1	Name & Address of Customer	:	**Kolimigundla Limestone Mine, M/s. Sainath Minerals, Kolimigundla (V) & (M) Kurnool Dist), Andhrapradesh.**
2	Customer Reference (Post/Courier/Personal)	:	Personally Handed Over On 08.10.2016
3	Sample Receipt Date	:	08.10.2016
4	Sample Description	:	**Limestone DTH-3**
5	Condition of Sample	:	Sample received in Polythene Bag
6	Date of Analysis taken	:	12.10.2016
7	Environmental Condition	:	-
8	Sampling Method	:	N.A

ANALYSIS RESULTS

S.No	Sample code	CaO% IS:1760 (Part3)1991 (Reaffirmed 2006)	MgO% IS:1760 (Part 3)1991 (Reaffirmed 2006)	SiO_2% IS:1760 (Part2)1991 (Reaffirmed 2006)
1.	SUMS/SM/463/0.00-1.00m	46.55	2.42	10.14
2.	SUMS/SM/464/1.00-2.00m	47.39	1.41	9.31
3.	SUMS/SM/465/2.00-3.00m	44.86	1.21	13.04
4.	SUMS/SM/466/3.00-4.00m	45.99	2.02	11.11
5.	SUMS/SM/467/4.00-5.00m	47.11	0.40	9.60
6.	SUMS/SM/468/5.00-6.00m	49.35	2.02	8.74
7	SUMS/SM/469/6.00-7.00m	51.03	1.21	6.87
8.	SUMS/SM/470/7.00-8.00m	47.67	0.40	10.04
9.	SUMS/SM/471/8.00-9.00m	48.51	1.81	8.79
10.	SUMS/SM/472/9.00-10.00m	48.79	0.40	9.92
11.	SUMS/SM/473/10.00-11.00m	44.30	1.01	15.00
12.	SUMS/SM/474/11.00-12.00m	44.02	1.41	14.68
13.	SUMS/SM/475/12.00-13.00m	22.71	0.40	51.49
14.	SUMS/SM/476/13.00-14.00m	23.55	0.81	50.25

Result on Dry Basis**

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ANALYSIS RESULTS

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15.	SUMS/SM/477/14.00-15.00m	22.99	0.20	51.42
16.	SUMS/SM/478/15.00-16.00m	39.26	0.81	19.97
17.	SUMS/SM/479/16.00-17.00m	41.50	1.01	16.52
18.	SUMS/SM/480/17.00-18.00m	42.06	0.40	14.57
19.	SUMS/SM/481/18.00-19.00m	48.23	2.42	9.38
20.	SUMS/SM/482/19.00-20.00m	47.11	0.81	12.12
21.	SUMS/SM/483/20.00-21.00m	47.39	1.01	11.63
22.	SUMS/SM/484/21.00-22.00m	48.23	2.22	9.58
23.	SUMS/SM/485/22.00-23.00m	43.18	1.21	15.64
24.	SUMS/SM/486/23.00-24.00m	45.14	2.22	12.67
25.	SUMS/SM/487/24.00-25.00m	45.42	0.40	13.20
26.	SUMS/SM/488/25.00-26.00m	44.86	0.60	14.28

Result on Dry Basis**

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Issued Date: 19.10.2016 **SUMS/TF/30/01**

TEST REPORT

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2	Customer Reference (Post/Courier/Personal)	:	Personally Handed Over On 08.10.2016
3	**Sample Receipt Date**	:	08.10.2016
4	**Sample Description**	:	**Limestone DTH-4**
5	**Condition of Sample**	:	Sample received in Polythene Bag
6	**Date of Analysis taken**	:	12.10.2016
7	**Environmental Condition**	:	-
8	**Sampling Method**	:	N.A

ANALYSIS RESULTS

S.No	Sample code	CaO% IS:1760 (Part3)1991 (Reaffirmed 2006)	MgO% IS:1760 (Part 3)1991 (Reaffirmed 2006)	SiO_2% IS:1760 (Part2)1991 (Reaffirmed 2006)
1.	SUMS/SM/489/0.00-1.00m	47.67	1.10	9.63
2.	SUMS/SM/490/1.00-2.00m	52.72	0.40	4.58
3.	SUMS/SM/491/2.00-3.00m	51.59	0.61	5.70
4.	SUMS/SM/492/3.00-4.00m	44.30	1.81	12.99
5.	SUMS/SM/493/4.00-5.00m	47.11	1.61	8.98
6.	SUMS/SM/494/5.00-6.00m	48.23	1.61	7.86
7	SUMS/SM/495/6.00-7.00m	48.79	0.40	8.51
8.	SUMS/SM/496/7.00-8.00m	47.67	1.24	9.63
9.	SUMS/SM/497/8.00-9.00m	49.07	3.02	5.61
10.	SUMS/SM/498/9.00-10.00m	47.11	3.63	6.96
11.	SUMS/SM/499/10.00-11.00m	45.42	3.43	8.85
12.	SUMS/SM/500/11.00-12.00m	45.99	2.42	9.30
13.	SUMS/SM/501/12.00-13.00m	47.39	0.40	10.11
14.	SUMS/SM/502/13.00-14.00m	46.55	1.01	10.15

Result on Dry Basis**

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ANALYSIS RESULTS

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15.	SUMS/SM/503/14.00-15.00m	41.50	1.21	14.99
16.	SUMS/SM/504/15.00-16.00m	39.54	1.01	17.16
17.	SUMS/SM/505/16.00-17.00m	45.99	1.21	10.50
18.	SUMS/SM/506/17.00-18.00m	43.74	0.40	13.55
19.	SUMS/SM/507/18.00-19.00m	44.86	2.02	10.82
20.	SUMS/SM/508/19.00-20.00m	42.06	6.05	9.59
21.	SUMS/SM/509/20.00-21.00m	44.86	3.02	9.81
22.	SUMS/SM/510/21.00-22.00m	45.14	3.23	9.33
23.	SUMS/SM/511/22.00-23.00m	44.86	4.03	8.80

Result on Dry Basis**

ANALYSED BY

AUTHORISED SIGNATORY

SAI UNIVERSAL MINING SERVICES Date

End of the Test Report

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ANNEXURE-XIII

NABL

National Accreditation Board for Testing and Calibration Laboratories

(An Autonomous Body under Department of Science & Technology, Govt. of India)

CERTIFICATE OF ACCREDITATION

SAI UNIVERSAL MINING SERVICES

has been assessed and accredited in accordance with the standard

ISO/IEC 17025:2005

"General Requirements for the Competence of Testing & Calibration Laboratories"

for its facilities at

Plot No.-15-DP2, KIADB, Sankalapura Industrial Area, Bellary Road, Hospet, Bellary(D), Karnataka

in the discipline of

CHEMICAL TESTING

(To see the scope of accreditation of this laboratory, you may also visit NABL website www.nabl-india.org)

Certificate Number T-2736

Issue Date 05/02/2016 **Valid Until** 04/02/2018

This certificate remains valid for the Scope of Accreditation as specified in the annexure subject to continued satisfactory compliance to the above standard & the additional requirements of NABL.

Signed for and on behalf of NABL

N. Venkateswaran	Anil Relia	Prof. S.K. Joshi
Program Manager	Director	Chairman

Annexure-XIIIA

FEASIBILITY STUDY REPORT

1.0 GENERAL MINE DESCRIPTION:

M/s. Sri Sainath Minerals, possess a mining lease of Kolimigundla Limestone Mine to win Limestone Ore in Sy.No. 195/4A 2A, 195/4A2B, 195/4A3A(p) of Kolimigundla Village & Mandal, Kurnool District, over an extent of 4.048 Ha. The location of this mine is shown in the Key Plan & is enclosed as Plate No.1 and the lease sketch is enclosed as Plate No.2.

The mining lease was originally granted on 23.08.2002 and the lease will be expired on 22.08.2022 as per the lease deed; the copy of the lease deed is enclosed as **Annexure-I.** The mining plan was prepared and approved by IBM vide Letter No. AP/KNL/MP/LST-78/HYD, dated 05.06.2002; the copy of the same is enclosed **as Annexure-IV.** The mining operations were commenced from 23-08-2002.

The Kolimigundla Limestone Mine of M/s. Sri Sainath Minerals has transferred the partial portion of the lease area due to financial & technical problems to M/s S.J.K. Steel Plant over an extent of 7.875Ha in Sy.No.191/A1, 191/A2, 188/3 and 195/4A3A(P) of Kolimigundla Village & Mandal, Kurnool District, Andhra Pradesh. The remaining portion of the lease area is retained by the M/s. Sri Sainath Minerals over an extent of 4.048Ha in Sy.No. 195/4A2A, 195/4A2B, 195/4A3A (P). The proceeding vide Letter No. 1360/M4/2006, dated 15-11-2006; the copy of the same is enclosed as Annexure-III and the model form for transfer of mining lease (Form-O) is enclosed as **Annexure-III.**

A modification in the mining plan including progressive mine closure plan was prepared under Rule 23 (2) of MCDR, 2016 for reduce the lease area from 11.923Ha to 4.048 Ha for the period of 2012-13 to 2016-17 and approved vide Letter No. AP/KNL/MP/Lst-78/HYD, dated 25.01.2013; the copy of the same is enclosed as **Annexure-IV.**

Now, the lessee is submitting the Review of Mining Plan under Rule 17(2) of MCR, 2016 for approval. The mining operations are proposed for the ensuing plan period is other than fully mechanized category 'A' for approval.

The Latitude and Longitude of the lease boundary corner pillars readings are taken by the using of GPS is given below.

Table No.1. The Latitude & Longitude of the lease boundary pillar

GPS READINGS OF THE LEASE BOUNDARY PILLARS		
Boundary Pillar	Latitude	Longitude
BP-1	N 15°04'42.40"	E 078°07'19.20"
BP-2	N 15°04'40.60"	E 078°07'22.80"
BP-3	N 15°04'39.50"	E 078°07'27.00"
BP-4	N 15°04'39.40"	E 078°07'28.60"
BP-5	N 15°04'35.20"	E 078°07'29.40"
BP-6	N 15°04'33.70"	E 078°07'26.20"
BP-7	N 15°04'33.90"	E 078°07'23.70"
BP-8	N 15°04'34.80"	E 078°07'23.60"
BP-9	N 15°04'34.40"	E 078°07'22.70"
BP-10	N 15°04'34.30"	E 078°07'21.20"
BP-11	N 15°04'39.80"	E 078°07'22.60"
BP-12	N 15°04'41.50"	E 078°07'19.30"
GPS Used: Garmin map 76CSx Map Datum: WGS-84		

The photographs of the boundary pillars and mine are enclosed **as Annexure-V**.

2.0 EXPLORATION:

The following items of work have been completed so far

A. Topographical survey it is carried on 1:1000 scale with contour interval of 1m covering the whole of the ML hold.

B. Detailed Geological mapping on 1:1000 scale covering the whole of the ML hold.

C. Sampling of Limestone: The samples are taken from the working pits, core & DTH boreholes are taken as channel sampling and sent to laboratory for analysis.

One sample is collected from the working pit and the samples from the DTH boreholes for chemical analysis. The standard sampling method of coning and quartering is followed.

The samples collected from the pits and DTH boreholes are analyzed and the analysis report has been enclosed as Annexure-X & XIII. The sample locations have been marked on the Geological Plan Plate No.4.

Table No.2. The result of these samples shows an average grade of Limestone

RADICALS IN %	AVERAGE GRADE OF LIMESTONE
SiO_2	11.7%
CaO	46.68%
MgO	2.26%

The lithologs of the core & DTH boreholes (Form-K) is enclosed as **Annexure-XI.**

D. Chemical Analysis: The samples from the mine were analyzed. The chemical analysis report of the 4 No's of core & DTH boreholes is enclosed as **Annexure-XII** & for pit is enclosed as **Annexure-IX.** The NABL Accredited Laboratory Certificate is enclosed as **Annexure-XIII**.

3.0 RESERVES:

Based on the data obtained from the existing mining pits the reserves have been re-estimated freshly with the help of Geological Plan & Cross-Sections drawn at 50m interval across strike of the ore. The exposures are marked on the plan and projected in the sections & the proved ore limit is marked up the pit bottom of the exposed ore bodies of Limestone. The estimation of ore reserves is made by using cross-section method using cross-sectional area method. The geological cross sections are prepared at an interval of 50m, across the strike of the ore body. The area of individual litho-units in each cross section is measured and multiplying sectional interval and tonnage is arrived by multiplying with its bulk density. The bulk density is considered as 2.25t/Cu.M for Limestone & 2.0t/Cu.M for waste with recovery taken as 98% and 2% for intercalated waste, the resources and reserves are estimated as per UNFC guidelines.

Proved Mineral Reserves (G1 scale of exploration) are the reserves established based on the 1 No of working pit, 4 No's of core boreholes & 4 No's of DTH boreholes at an interval of 200m x 200m, the limestone deposits are exposed in the three dimensions which is explored during the previous excavation of the area is considered as Proved Mineral Reserves UNFC code is taken as 121.

All the G1 scale of exploration zone and limit are shown on the Geological Plan & Sections as Plate No.4 & 5 respectively.

Table No.3. The detailed summary of Geological Reserve/Resource as on 10.10.2016.

Summary of Reserves/Resources

Level of Exploration	Resource in million tons	Grade
	Limestone	
Proved Mineral Reserves (121)	1.03	46.68%
Feasibility Mineral Resources (221)	0.76	
TOTAL	1.79	

The threshold limit of IBM for Limestone is CaO-35% (Min), MgO-4% (Max), SiO_2-18% (Max) & Alkalies-0.5 %(Max).

Mineral Reserves/Resources:

Mineral Resources: (Mineral resources may be estimated purely based on level of exploration, with reference to the threshold value of minerals declared by IBM)

The reserves are furnished according to the MEMC Rules, the cutoff grade and threshold values considered for reserves estimation. For the ascertaining of UNFC code following procedure is adopted.

i) The category of the deposit as per MEMC Rules comes under Category-I of Stratiform & Tabular Deposit of Regular Habit.

ii) The status of exploration is taken as G1 scale of exploration, because lessee has explored the area with 1 no of working pit, 4 No's of core boreholes & 4 No's of DTH boreholes. The Limestone is proved in three-dimensional view in working pit and the area enclosed in 1 no of working pit, 4 No's of core boreholes & 4 No's of DTH boreholes in less than 200m X 200m interval are considered for G1 scale of exploration. The ore body exposed in the pit varies from 11.3m depth from the surface in the pit and upto 12-30m depth in the boreholes. Hence, it is geologically explored which is considered as Geological Axis '1'.

iii) For Blasting and loading, about 29 employees are required. The approximate estimated cost towards production is Rs.210/- per ton. However, there is good demand in market for all grade and size and the usual selling price will be ranging between 350-400 rupees per ton as per the market fluctuation, so Limestone is economically viable. Hence, it is considered as economically feasible which is taken as Feasible Axis '2'.

iv) Based on the exploration with existing working pit, trail pits and its analysis, review of mining plan period is prepared as per the provisions & will be submitted to the IBM.

The reserves have been ascertained above economic cut-off grade i.e. CaO-35% (Min), MgO-4% (Max), SiO_2-18% (Max) & Alkalies-0.5%(Max) and by considering all above factors the mining is economical. Hence it is considered as Economical Axis '1'.

v) The combining of EFG axis the UNFC code for reserves is assigned as 121.

The data of mineral exposed in three dimensional views of the working pit, core & DTH boreholes in the mining area is taken into consideration for reserve estimation.

Based on the exploration, available measured field data, exposure in the lease area and adjoining area entire geological sections are updated and ore reserves have been freshly-estimated as on 10.10.2016.

The Summary of Mineable Reserve

CATEGORY	RESOURCE IN MILLION TONNES	GRADE
	LIMESTONE	CaO
Proved Mineral Reserves (121)	1.03	46.68%
TOTAL	1.03	

The Summary of Blocked Reserves & Resources

CATEGORY	RESOURCE IN MILLION TONS	SCALE OF EXPLORATION
	LIMESTONE	
Feasibility Mineral Resources (221)	0.76	G1
TOTAL	0.76	

Mineral Reserves/Resources:

Mineral Resources: (Mineral resources may be estimated purely based on level exploration, with reference to the threshold value of minerals declared by IBM)

Summary of Mineral Reserves/Resources

Level of Exploration	Resource in million tons	Grade
	Limestone	
Proved Mineral Reserves (121)	1.03	46.68%
Feasibility Mineral Resources (221)	0.76	
TOTAL	1.79	

. The total category- wise updated reserves and resource as on 10.10.2016

Classification	UNFC Code	Quantity in Million Tonnes	Grade		
(1)	(2)	(3)	(4)		
Total Mineral Resources (A + B)		Limestone	CaO%	MgO%	SiO_2
A. Mineral Reserve					
(1) Proved Mineral Reserve	111	--	--	--	--
(2) Probable Mineral Reserve	121	1.03	46.68	2.26	11.7
B. Remaining Resources					
(1) Feasibility Mineral Resource	221	0.76	46.68	2.26	11.7
(2) Prefeasibility Mineral Resource	222	--	--	--	--
(3) Measured Mineral Resource	331	--	--	--	--
(4) Indicated Mineral Resource	332	--	--	--	--
(5) Inferred Mineral Resource	333	--	--	--	--
(6) Reconnaissance Mineral Resource	334	--	--	--	--
Total		1.79			

The threshold limit of IBM for Limestone is CaO-35% (Min), MgO- 4% (Max), SiO_2 – 18% (Max) & Alkalies-0.5 %(Max).

GEOLOGICAL AXIS

G1(Detailed Exploration)	Justification
1.Geological Survey: (i)Mapping-For coal mapping 1:5000 for other minerals 1:1000 (ii)Preparation of detailed topographical-cum-geological map including all surface geological features, extent of deposit, structure, location of boreholes, assay plan and sections of exploratory mine development and borehole data. (iii)Topogrid/triangulation stations/identified fiducials linking in the maps	1.Geological Survey: (i) Mapping-surface and geological maps are prepared on 1:1000 scale and enclosed as Plate No.4. (ii)The stations are identified and these are linked in surface plan as shown on the Plate No.3 and the geological mapping showing all the surface geological features and deposit in the area is shown on the Plate No.4. The Geological sections of the area in two dimensional views are shown on Plate No.5. (iii)The stations are identified and these are linked in the surface plan as shown on the Plate No.3.
2. Geochemical survey: Detailed grid pattern sampling and analysis.	2.Geochemical survey: The chemical analysis report of the DTH, core boreholes & pit is enclosed as Annexure-XIII & X.
3. Geophysical Survey: Detailed and specific borehole geophysical	3.Geophysical Survey: The DTH, core boreholes are drilled upto a depth of

<table>
<tr><td>survey.</td><td>12-30m.</td></tr>
<tr><td>4.Technological:
(i)Pitting
2 to 5 per sq. km. for simple deposits

(ii)Trenching: At spacing of 200–300m
(iii)Drilling: Closer spaced (with definite grid pattern) than that for G2 category;
(iv)Exploratory mining and check drilling results if possible
(v)Sampling-Systematic pit and trench sampling, core and sludge sampling for laboratory scale and bulk sample for the pilot plant scale beneficiation studies.</td><td>4.Technological:
(i) Pitting –There is 1 No of working pit & 4 No's of core & DTH boreholes in the lease area. The area combining 1 No of working pit & 4 No's of core & 4 No's of DTH boreholes are considered for G1 scale of exploration.
The distance between the boreholes
<table>
<tr><th>Sl.No.</th><th>Particulars</th><th>Distance</th></tr>
<tr><td>1</td><td>DTH-1 to CBH-2</td><td>75m</td></tr>
<tr><td>2</td><td>CBH-2 to CBH-1</td><td>150m</td></tr>
<tr><td>3</td><td>CBH-1 to CBH-4</td><td>133m</td></tr>
<tr><td>4</td><td>CBH-4 to DTH-4</td><td>22m</td></tr>
<tr><td>5</td><td>DTH-4 to DTH-3</td><td>90m</td></tr>
<tr><td>6</td><td>DTH-3 to DTH-2</td><td>69m</td></tr>
<tr><td>7</td><td>DTH-2 to CBH-3</td><td>51m</td></tr>
<tr><td>8</td><td>CBH-3 to CBH-2/DTH-1</td><td>123/158m</td></tr>
</table>
(ii)Trenching-Not carried out.
(iii)Drilling: Not carried out.

(iv)The exploratory mining is carried out by working pits & core boreholes in the area.
(v) Samples were collected from the working pits & core and DTH boreholes for chemical analysis. The standard sampling method of coning and quartering is followed. The chemical analysis report of the DTH, core boreholes & pit is enclosed as Annexure-XIII & X. The sample locations have been marked on the Geological Plan Plate No.4.</td></tr>
<tr><td>5.Petrographic and mineragraphic study: Refining of data on the petrographic character of rocks of the deposit and its surroundings, alterations (if any), including study of grain size texture gangue and its liberation characteristics for further refining of data.</td><td>5. Petrographic and mineragraphic study:
No Petrographic study of character of rocks is carried out.</td></tr>
<tr><td>6. Geostatistical analysis of borehole data thickness of ore: waste encountered in holes, assay values of samples if considered necessary.</td><td>6. Geostatistical analysis:
Not carried out in this area.</td></tr>
</table>

FEASIBILITY AXIS

F1(Feasibility study)	Justification
1. Geology: Geology of area and project, detailed exploration, closed spaced drilling, ore body modelling, bulk samples for beneficiation, geotechnical and ground water studies.	1.Geology: Geology of area and project: The subject area exposes the middle massive limestone unit. The limestone here is grey-dark grey, hard, compact and fine grained (micrite). It is

<table>
<tr><td></td><td>traversed by very thin (<0.1 cm) quartz veins. Limestone has stylolites, which indicate homogeneity of the rock.

And towards south-east of the area Limestone belongs slightly flaggy because of increase in argillaceous component. The trend of the bedding in general is NNE-SSW and E-W. the bedding grades from 100-150 towards South East. The subjected area is also partly covered by patches of black cotton soil. The thickness of the black cotton soil is less than 1m and is noticed mainly in the south-western part of the area.</td></tr>
<tr><td>2.Mining:
Mining plan, mine recoveries and efficiencies, equipment selection, man power requirement</td><td>2.Mining:
As proposed in the previous mining plan to operate the mine open cast fully mechanised method will be followed during the review of mining plan period. The working operation will be continued from the same pit; it will extend in all the directions for extraction of the mineral.
The bench height will be maintained 3m and the width will be not less than 6m will be maintained. The drilling will be done with the IRand the blasting with slurry explosive. The blasted/ excavated mineral is loaded by excavators into the tippers of 10-ton capacity and transported to the crushing/screening plant. The Excavator will be using for extraction and loading of the mineral &waste. The bench slope will be maintained 45^0 slopes.
The details of Man Power are furnished in the below table
<table>
<tr><th>Sl. No.</th><th>Category of persons</th><th>No's</th></tr>
<tr><td>1</td><td>Mines Manager cum Engineer</td><td>1</td></tr>
<tr><td>2</td><td>Geologist</td><td>1</td></tr>
<tr><td>3</td><td>Skilled labors</td><td>2</td></tr>
<tr><td>4</td><td>Semi-Skilled Labors</td><td>2</td></tr>
<tr><td>5</td><td>Unskilled</td><td>23</td></tr>
<tr><td colspan="2">Total</td><td>29</td></tr>
</table></td></tr>
<tr><td>3.Environment:
EIA studies and EMP including socio-economic impact, rehabilitation of project affected persons, waste disposal /reclamation. Detailed land use data</td><td>3.Environment:
The base line data will be collected and the land use are mentioned in the below text. The Environmental Clearance will be obtained after the approval of the review of mining plan period.</td></tr>
<tr><td>4.Processing: Pilot scale/industrial scale of investigation data, list of equipment, manpower and environmental considerations</td><td>4.Processing:
No processing technique carried.</td></tr>
</table>

<table>
<tr><td>like waste disposal of tailings, etc.</td><td></td></tr>
<tr><td>5.Infrastructure and Services, construction Activities: Full details</td><td>5.Infrastructure and Services, construction activities: These roads would be developed for higher carrying capacities. The approach roads are however sufficient to cater to the proposed production. The lessee will provide infrastructure facilities like office, canteen, rest shelters, drinking water, medical facilities, transport and others. The lessee is having excavator and tippers to cater the produced ore from the mine.
The ML area lies at a distance of about of 2km from Kolimigundla. Tadipatri is the nearest railway station is about 25km from Kolimigundla. The mine is approachable through Bethamcherla-Tadipatri BT road. The villagers in around the mine are mostly depend on agriculture and mining work. Electricity is available in the area and also in the villages. The lessee is also maintaining pucca structures for office, First aid station and shelters. Educational facilities upto 12th standard is available at Kolimigundla Village.
Thus, the ML area can be considered and provided with all man power, infrastructure and other services.</td></tr>
<tr><td>6.Costing:
Detailed break up of capital cost, operating cost, details of working capital.</td><td>6.Costing:
Cost of Production
<table>
<tr><td>Item</td><td>Cost / tons(Rs)</td></tr>
<tr><td>Direct cost:</td><td></td></tr>
<tr><td>(a) Exploration</td><td>10</td></tr>
<tr><td>(b) Mining</td><td>110</td></tr>
<tr><td>(c) Screening & Sorting</td><td>--</td></tr>
<tr><td>Over-head cost</td><td>10</td></tr>
<tr><td>Depreciation</td><td>4</td></tr>
<tr><td>Interest</td><td>3</td></tr>
<tr><td>Royalty</td><td rowspan="2">63</td></tr>
<tr><td>Taxes</td></tr>
<tr><td>Deed rent</td><td>-</td></tr>
<tr><td>Others</td><td>10</td></tr>
<tr><td>TOTAL:</td><td>210</td></tr>
</table>
This rough cost may change in future depends on the market fluctuation.</td></tr>
<tr><td>7 & 8. Marketing & Economic viability:</td><td>7 & 8. Marketing & Economic viability:
There is good demand in market for all grade and size and the usual selling price will be more than the production cost, hence Limestone is economical.</td></tr>
<tr><td>9. Other factors:</td><td>9. Other factors:
The blocked limestone is classified under feasible resource based on the local geology of the area.</td></tr>
</table>

	Hence the resource is estimated under Feasibility mineral resources (221) category.

ECONOMIC AXIS

E1(Economic)	Justification
1. Detailed Exploration.	1. Detailed Exploration. The lease has been explored with 1 no of working pit & 4 No's of core & 4 No's of DTH boreholes. The distance between the pits Dimension details of the Working Pits

Sl.No.	Particulars	Distance
1	DTH-1 to CBH-2	75m
2	CBH-2 to CBH-1	150m
3	CBH-1 to CBH-4	133m
4	CBH-4 to DTH-4	22m
5	DTH-4 to DTH-3	90m
6	DTH-3 to DTH-2	69m
7	DTH-2 to CBH-3	51m
8	CBH-3 to CBH-2/DTH-1	123/158m

SL.NO.	WORKING PIT ID	L X W X D
1	WP-1	136 X 196 X 11.3

2. Mining Report / Mining Plan/ working mines.	2. Mining Report / Mining Plan/ Working mines. The Review of Mining Plan is prepared as per the provisions will be submitted to the IBM. The Mining will be carried out as per Review of Mining Plan.
3.Specific end-use grades of Reserves (above economic cut-off grade).	3. Specific end-use grades of Reserves (above economic cut-off grade). The end use grade Limestone is CaO-35% (Min), MgO-4% (Max), SiO_2 – 18% (Max) Alkalis- 0.5%(Max). The cut-off grade i.e. CaO-35% (Min), MgO- 4% (Max), SiO_2 – 18% (Max) Alkalis- 0.5%(Max).
4. Specific knowledge of Forest/Non-Forest and other land use data.	4. Specific end-use grades of Forest/Non-Forest and other Land use data. The ML is consisting of Patta land. The details are given in review of mining plan in Location & Accessibility.

Justification of UNFC Code

Proved Mineral reserves (121)

Geological Axis: So far, the exploration carried out in the form of exploratory mining in last modification of the mining plan period by 1 no of working pit, 4 No's of core

boreholes & 4 No's of DTH boreholes by the lessee in that Limestone mineral is exposed in all three dimension in 1 no of working pit & 4 No's of core boreholes & 4 No's of DTH boreholes upto a 11.3m depth (pit) and 12-30m(boreholes).

The area combining of 1 no of working pit, 4 No's of core boreholes & 4 No's of DTH boreholes is considered for G1. The minerals are a parallel bed lying one upon the other and extending continuously in strike and dip direction. Hence, it is geologically feasible which is considered as Geological Axis '1'.

Feasibility Axis: For Blasting and loading, about 29 employees are required. The approximate estimated cost towards production is Rs.210/- per ton. However, there is good demand in market for all grade and size and the usual selling price will be ranging between 350-400 rupees per ton as per the market fluctuation, so Limestone is economically viable. Since mining operations are carried from 2006, since then the limestone is being saleable. Hence, this mining project is feasible, which is considered as Feasibility Axis '2'.

Economic Axis: All the mineable reserves are having saleable grade and its analysis report is showing the grade, the Limestone grade varies from 43.35 to 47.98% of CaO, 1.16 to 3.37% of MgO, 6.87 to 16.54% SiO_2%. Moreover, last two years a sale of mineral show the mining is economical. Hence, it is economically feasible, which is considered as Economic Axis '1'.

4.0 PRODUCTION SCHEDULE:

During the Review of Mining plan period working will be done from sections, A-A' to E-E' and the mining depth will vary from 261mRL to 237mRL in the Limestone. The proposed year wise production and development are shown on the Production & Development Plan is enclosed as Plate No.6A to 6E. The year wise proposed production and development details are furnished in the following table

The year-wise excavation details of Limestone Ore

Year	Pit No.	Total Tentative Excavation (Cu.M)	ROM (Cu.M)		ROM Waste Ratio	Top Soil (Cu.M)
			Ore (Cu.M) *	Mineral Reject (Cu.M)		
1	2	3	4	5	6	7
2017-18	1	68,028	66,667	1,361	1:0.02	--
2018-19	1	68,277	66,667	1,361	1:0.02	249
2019-20	1	68,315	66,667	1,361	1:0.02	287
2020-21	1	69,899	66,667	1,361	1:0.05	1,871
2021-22	1	68,197	66,667	1,361	1:0.02	3,059

* Tentative tonnage of the ore may be arrived by computing approximate bulk density of 2.25 for ore and 2.00 for soil and recovery factor of 98% as these data are variable and may be established on time series.

4.1 MINING METHOD:

The mine was worked with open cast fully mechanized category 'A'. The mining operations and workings are adopted by keeping 3m bench height and the width is 6m. 1 No of working pit is opened in the past period in the lease area Mining workings are carried out by jack hammer drilling and blasting. Drilling jack hammer is done by using compressor.

Now, in the proposed review of mining plan in order to operate the mine opencast fully mechanised method will be followed. The working operation will be continued from the same pit; it will extend in all the directions for extraction of the mineral. The bench height of 3m and the width will be not less than 6m will be maintained.

The drilling will be done with the jack hammer and the blasting with slurry explosive. The blasted/excavated mineral is loaded by excavators into the tippers of 10ton capacity and transported directly to the consumer or buyer. The excavator will be used for extraction and loading of the mineral & waste. The bench slope will be maintained 45^0 slope. The proposed mining layout plan for each year has been shown in Plate No.6A to 6E. The waste generating as intercalated waste will be dumped in the temporary dump in the demarcated place as shown in the Proposed Production & Development Plan and later utilized for road development purpose for transport within the mine. The top-soil generated will be utilized for afforestation purposes. The benches are formed directly in the ore body only. The Limestone Pit will be continued from Pit-1 in the lease area.

The general ground water table is found at a depth of 60m in the surrounding areas. The mining operations may reach upto maximum depth of 27m, which is above the ground water table. Hence, no ground water table is likely to be encountered throughout the life of the mine.

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The general ground water table is found at a depth of 60m in the surrounding areas. The mining operations may reach upto maximum depth of 27m, which is above the ground water table. Hence, no ground water table is likely to be encountered throughout the life of the mine.

ULTIMATE PIT LIMIT

The Ultimate Pit Limit so drawn on the basis of 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 PITLIMIT is likely to change. The said Ultimate Pit Limit is demarcated on the geological plan and enclosed as Plate No.4.

MINE MACHINERIES

The list of required mining machineries for proposed production & drilling blasting planning, currently being used is given in the below table

List of Proposed Mining Machineries

Sl.No.	Equipment / Machinery	No of Units	Capacity
1	Tippers /Trucks	3	10T
2	IR drilling machine	2	83 mm dia, 100 cfm
3	Water Tankers	1	10,000 lit
4	Excavator	3	1.6 Cu.M
5	Front End Loader	2	2.6 Cu.M

The transport of ore from mine head to various customers is through hired tippers or trucks by road from plant.

5.0 BENEFICIATION:

No mineral processing technique will be adopted. However, dry crushing and screening of ROM will be done at the plant as per the buyer's specification with the help of 1 fixed crushing & screening plants of 15 TPH. The jaw crusher is having a size of 75 x 40mm and 50 x 30mm size in two stages. The primary material is passed from grizzly, there the -40mm material will pass directly without subjecting to crushing. The +40mm material will pass through jaw crusher. The finished product of 40-10mm material will be separated by screening to one bunker and 10-20mm material will be separated by screening to another bunker. The process flow chart of screening plant is enclosed as Annexure–XIV.

6.0 MARKETING:

The Limestone produced from this area will be sold to Cement & Steel Industries. The range of physical and chemical specifications of limestone supplied locally is furnished in the below table:

Some of the buyer's typical specifications are as given below:

Name of the Industry	Size of the ore	Chemical composition
Steel plants	+10 mm to –40mm	Cao+35%, MgO+3%, SiO_2 <8%
Cement Plant	+0-200 mm	Cao+35%, SiO_2 <15%

7.0 INFRASTRUCTURE:

The ML area lies at a distance of about of 1.8km from Kolimigundla. Tadipatri is the nearest railway station is about 25km from Kolimigundla. The Mine is approachable through Bethamcherla-Tadipatri BT road. The villagers in around the mine are mostly depend on agriculture and mining work. Electricity is available in the area and also in the villages. The lessee is also maintaining pucca structures for office, First aid station and shelters. Educational facilities up to 12th standard are available at Kolimigundla Village.

Thus the ML area can be considered and provided with all man power, infrastructure and other services.

8.0 ENVIRONMENTAL REQUIREMENTS:

The Environmental Clearance will be obtained on the approval of review of mining plan.

9.0 LEGAL FACTORS:

The Company has been holding mining lease over the subject area since 2002. It did not encounter any legal problem related to tribal issues or National park so far since neither of issues exists at all. Thus, the company has been enjoying hassle free possession of the property and no in the context is possible.

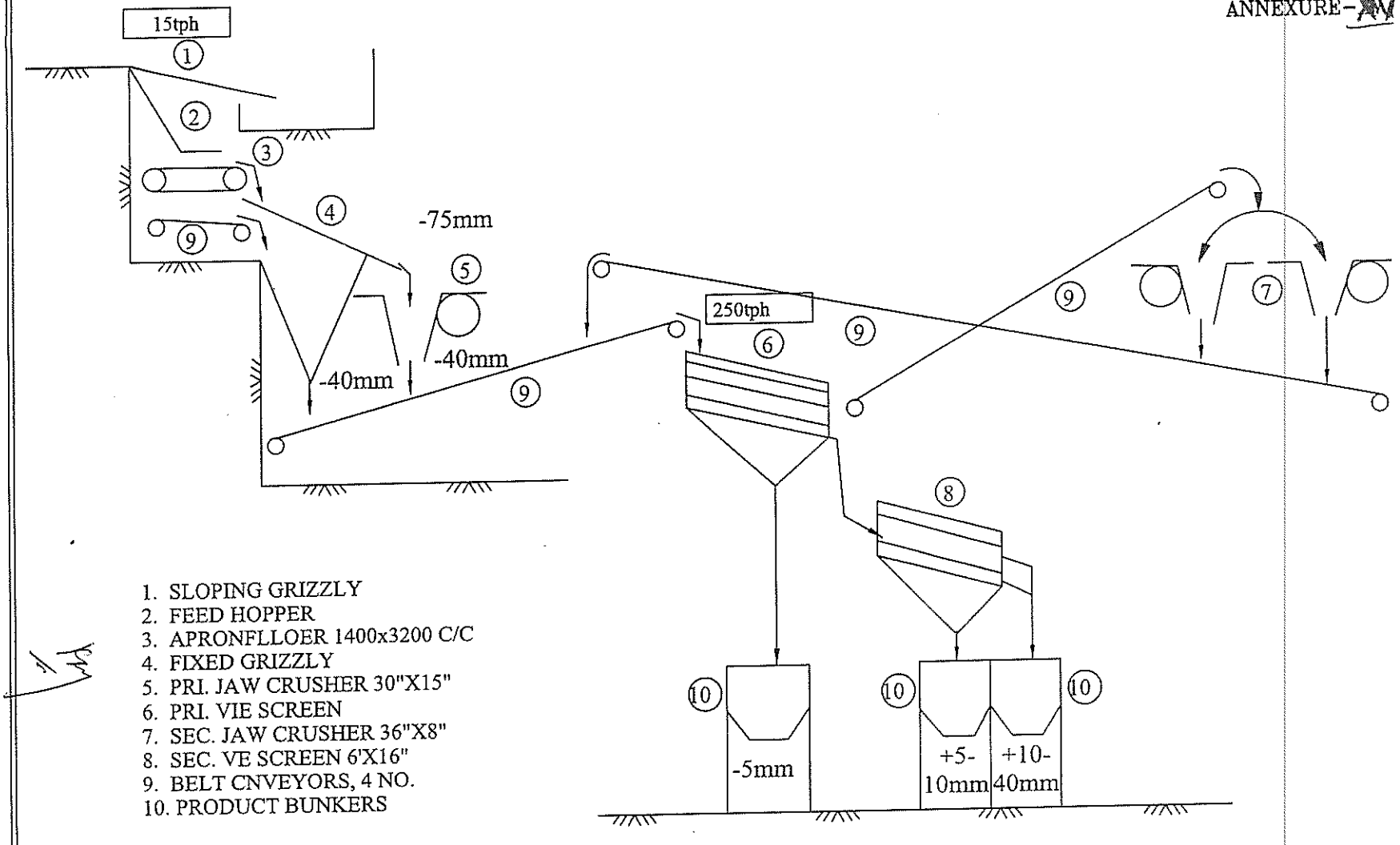
10.0 ECONOMIC EVALUATION:

The Company has been producing Limestone since 2002. The cost of production of Limestone at present is Rs 210/-per ton comprising:

Winning of ore including development:	Rs = 110.00
Transportation from pit to Yard:	Rs = 37.00
Screening and Sorting:	Rs = 0.00
Royalty and Taxes:	Rs = 63.00
Total: Rs	Rs= 210.00

In the present market scenario, the very low grade Ore containing 35% CaO and above is also marketed. Therefore, the entire ROM is saleable as there is a heavy demand and market boom for Limestone, the limestone is selling over a range of about Rs 350 - 400. Since, the project is profitable.

ANNEXURE-XV



1. SLOPING GRIZZLY
2. FEED HOPPER
3. APRONFLLOER 1400x3200 C/C
4. FIXED GRIZZLY
5. PRI. JAW CRUSHER 30"X15"
6. PRI. VIE SCREEN
7. SEC. JAW CRUSHER 36"X8"
8. SEC. VE SCREEN 6'X16"
9. BELT CNVEYORS, 4 NO.
10. PRODUCT BUNKERS

PROPOSED FLOW SHEET FOR CALCITE & LIMESTONE CRUSHING SCREENING PLANT

Annexure- XV

SAI UNIVERSAL MINING SERVICES

[Mining, Survey, Geology, Analytical & Environment]

NABL Accredited Laboratory Cert. No. T-2736

JAS-ANZ

ISO 9001:2008
ISO 14001:2004
OHSAS 18001:2007

ANALYSIS REPORT OF AMBIENT AIR QUALITY DATA

1.	Name of the Location	:	Core Zone Area
2.	Name of the Project	:	Kolimigundla Lime stone Mine
3.	Name of the client	:	M/s. Sri Sainath minerals
4.	Sample Collected By	:	Sai Universal Mining Services, Hospet
5.	Date of Collection	:	23.08.2016
6.	Particulars of Sample Collected	:	RDS GTI-151, FPS GTI-131
7.	Date of Sample Receipt	:	25.08.2016
8.	Date of Analysis Started	:	25.08.2016
9.	Sampling Method	:	IS:5182 (Part 5):1975 (Reaffirmed 1998)
10.	Report to be Sent	:	15.09.2016

Duration of Monitoring	PM10 [µg/m³]	PM2.5 [µg/m³]	SO_2 [µg/m³]	NO_2 [µg/m³]
	IS : 5182 : (Part 23)2004 Reaffirmed 2006)	SUMS/SOP/038 Issued No/Date:01/03.05.2015(Based on CPCB Guidelines for the Measurement of Ambient Air Pollutants Volume-1 may 2011)	IS : 5182 : (Part 2) 2001 Reaffirmed 2006)	IS : 5182 : (Part 6) 2006 Reaffirmed 2012)
	Result	Result	Result	Result
8 Hrs	67	24	10.5	14.6
As per NAAQ Standards	100	60	80	80

INFERENCE	As per NAAQ Standards(2009); Report Status: - Measured Values for the above parameters are within the limit.

ANALYSED BY

Sai Universal Mining Services Hospet

AUTHORISED SIGNATORY

End of the Test Report

Head Office : Plot No. 15-DP2, KIADB, Sankalapura Industrial Area, Near Water Tank, Ballari Main Road, Hosapete - 583 201. Ballari Dist., Karnataka, Cell: +91 94498 15560, +91 88844 94243, e-mail: sums.hpt@gmail.com, sumslaboratory@gmail.com, kpr@sums.org.in website: www.sums.org.in

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ANALYSIS REPORT OF AMBIENT AIR QUALITY DATA

1.	Name of the Location	:	Kolimigundla Village
2.	Name of the Project	:	Kolimigundla Lime stone Mine
3.	Name of the client	:	M/s. Sri Sainath minerals
4.	Sample Collected By	:	Sai Universal Mining Services, Hospet
5.	Date of Collection	:	23.08.2016
6.	Particulars of Sample Collected	:	Envirotech 460BL, APM550
7.	Date of Sample Receipt	:	25.08.2016
8.	Date of Analysis Started	:	25.08.2016
9.	Sampling Method	:	IS:5182 (Part 5):1975 (Reaffirmed 1998)
10.	Report to be Sent	:	15.09.2016

Duration of Monitoring	PM10 [µg/m³]	PM2.5 [µg/m³]	SO_2 [µg/m³]	NO_2 [µg/m³]
	IS : 5182 : (Part 23)2004 Reaffirmed 2006)	SUMS/SOP/038 Issued No/Date:01/03.05.2015(Based on CPCB Guidelines for the Measurement of Ambient Air Pollutants Volume-1 may 2011)	IS : 5182 : (Part 2) 2001 Reaffirmed 2006)	IS : 5182 : (Part 6) 2006 Reaffirmed 2012)
	Result	Result	Result	Result
24 Hrs	46	19	7.4	10.2
As per NAAQ Standards	100	60	80	80

INFERENCE	As per NAAQ Standards(2009); Report Status: - Measured Values for the above parameters are within the limit.

ANALYSED BY

Date: 1-9-16

AUTHORISED SIGNATORY

End of the Test Report

Head Office : Plot No. 15-DP2, KIADB, Sankalapura Industrial Area, Near Water Tank, Ballari Main Road, Hosapete - 583 201. Ballari Dist., Karnataka, Cell: +91 94498 15560, +91 88844 94243, e-mail: sums.hpt@gmail.com, sumslaboratory@gmail.com, kpr@sums.org.in website: www.sums.org.in

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ANALYSIS REPORT OF AMBIENT AIR QUALITY DATA

1.	Name of the Location	:	Kalavadla Village
2.	Name of the Project	:	Kolimigundla Lime stone Mine
3.	Name of the client	:	M/s. Sri Sainath minerals
4.	Sample Collected By	:	Sai Universal Mining Services, Hospet
5.	Date of Collection	:	24.08.2016
6.	Particulars of Sample Collected	:	RDS GTI-151, FPS GTI-131
7.	Date of Sample Receipt	:	25.08.2016
8.	Date of Analysis Started	:	25.08.2016
9.	Sampling Method	:	IS:5182 (Part 5):1975 (Reaffirmed 1998)
10.	Report to be Sent	:	15.09.2016

Duration of Monitoring	PM10 [µg/m³]		PM2.5 [µg/m³]		SO_2 [µg/m³]		NO_2 [µg/m³]	
	IS : 5182 : (Part 23)2004 Reaffirmed 2006)		SUMS/SOP/038 Issued No/Date:01/03.05.2015(Based on CPCB Guidelines for the Measurement of Ambient Air Pollutants Volume-1 may 2011)		IS : 5182 : (Part 2) 2001 Reaffirmed 2006)		IS : 5182 : (Part 6) 2006 Reaffirmed 2012)	
	Result	STD	Result	STD	Result	STD	Result	STD
24 Hrs	48	100	19	60	8.1	80	11.2	80

INFERENCE	As per NAAQ Standards(2009); Report Status: - Measured Values for the above parameters are within the limit.

ANALYSED BY

AUTHORISED SIGNATORY

End of the Test Report

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ANALYSIS REPORT OF AMBIENT AIR QUALITY DATA

1. Name of the Location : Itikyala Village
2. Name of the Project : Kolimigundla Lime stone Mine
3. Name of the client : M/s. Sri Sainath minerals
4. Sample Collected By : Sai Universal Mining Services, Hospet
5. Date of Collection : 23.08.2016
6. Particulars of Sample Collected : LE APM 860,Ecotech AAS127
7. Date of Sample Receipt : 25.08.2016
8. Date of Analysis Started : 25.08.2016
9. Sampling Method : IS:5182 (Part 5):1975 (Reaffirmed 1998)
10. Report to be Sent : 15.09.2016

Duration of Monitoring	PM10 [µg/m³]	PM2.5 [µg/m³]	SO_2 [µg/m³]	NO_2 [µg/m³]
	IS : 5182 : (Part 23)2004 Reaffirmed 2006)	SUMS/SOP/038 Issued No/Date:01/03.05.2015(Based on CPCB Guidelines for the Measurement of Ambient Air Pollutants Volume-1 may 2011)	IS : 5182 : (Part 2) 2001 Reaffirmed 2006)	IS : 5182 : (Part 6) 2006 Reaffirmed 2012)
	Result	Result	Result	Result
24 Hrs	46	18	7.3	10.3
As per NAAQ Standards	100	60	80	80

INFERENCE	As per NAAQ Standards(2009); Report Status: - Measured Values for the above parameters are within the limit.

ANALYSED BY

Sai Universal Mining Services Date: 5.9.16

AUTHORISED SIGNATORY

End of the Test Report

Head Office : Plot No. 15-DP2, KIADB, Sankalapura Industrial Area, Near Water Tank, Ballari Main Road, Hosapete - 583 201. Ballari Dist., Karnataka, Cell: +91 94498 15560, +91 88844 94243, e-mail: sums.hpt@gmail.com, sumslaboratory@gmail.com, kpr@sums.org.in website: www.sums.org.in

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ANALYSIS REPORT OF AMBIENT AIR QUALITY DATA

1.	Name of the Location	:	Mirjapuram Village
2.	Name of the Project	:	Kolimigundla Lime stone Mine
3.	Name of the client	:	M/s. Sri Sainath minerals
4.	Sample Collected By	:	Sai Universal Mining Services, Hospet
5.	Date of Collection	:	24.08.2016
6.	Particulars of Sample Collected	:	Envirotech 460BL, APM550
7.	Date of Sample Receipt	:	25.08.2016
8.	Date of Analysis Started	:	25.08.2016
9.	Sampling Method	:	IS:5182 (Part 5):1975 (Reaffirmed 1998)
10.	Report to be Sent	:	15.09.2016

Duration of Monitoring	PM10 [µg/m³]	PM2.5 [µg/m³]	SO_2 [µg/m³]	NO_2 [µg/m³]
	IS : 5182 : (Part 23)2004 Reaffirmed 2006)	SUMS/SOP/038 Issued No/Date:01/03.05.2015(Based on CPCB Guidelines for the Measurement of Ambient Air Pollutants Volume-1 may 2011)	IS : 5182 : (Part 2) 2001 Reaffirmed 2006)	IS : 5182 : (Part 6) 2006 Reaffirmed 2012)
	Result	Result	Result	Result
24 Hrs	41	17	6.5	9.1
As per NAAQ Standards	100	60	80	80

INFERENCE	As per NAAQ Standards(2009); Report Status: - Measured Values for the above parameters are within the limit.

ANALYSED BY

Sai Universal Mining Services Date:

AUTHORISED SIGNATORY

End of the Test Report

Head Office : Plot No. 15-DP2, KIADB, Sankalapura Industrial Area, Near Water Tank, Ballari Main Road, Hosapete - 583 201. Ballari Dist., Karnataka, Cell: +91 94498 15560, +91 88844 94243, e-mail: sums.hpt@gmail.com, sumslaboratory@gmail.com, kpr@sums.org.in website: www.sums.org.in

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e-mail: kpr@sums.org.in, website : www.sums.org.in

AMBIENT NOISE LEVEL MONITORING REPORT

1. Name of the Project : Kolimigundla Lime stone Mine
2. Name of the client : M/s. Sri Sainath minerals
3. Sample Collected By : Sai Universal Mining Services, Hospet
4. Particulars of Sample Collected : Envirotech SLM 100
5. Report to be Sent : 15.09.2016
6. Method Adopted : IS : 9989:1981 (Reaffirmed 2006)

Sl. No	Sample Location	Date of Sampling	Time Frequency	Parameters in dB(A)		
				Min.	Max.	L_{EQ}
1	Core Zone Area	23.08.2016	11:40AM to 11:55 AM	62.3	74.2	68.7
2	Kolimigundla Village	23.08.2016	03:10PM to 03:25 PM	43.7	51.4	47.9
3	Mirjapuram Village	24.08.2016	10:20AM to10:35 AM	44.6	50.7	47. 8
4	Itikyala Village	24.08.2016	02:45PM to 03:00 PM	46.7	52.8	49.9
5	Kalavadla Village	24.08.2016	04:40PM to 04:55 PM	44.6	51.7	48.8

INFERENCE	As per CPCB/KSPCB Standards(2009), Report Status: - Measured Values for the above parameters are within the limit.

Sai Universal Mining Services Date: 4

AUTHORISED SIGNATORY

End of the Test Report

Head Office : Plot No. 15-DP2, KIADB, Sankalapura Industrial Area, Near Water Tank, Ballari Main Road, Hosapete - 583 201. Ballari Dist., Karnataka, Cell: +91 94498 15560, +91 88844 94243, e-mail: sums.hpt@gmail.com, sumslaboratory@gmail.com, kpr@sums.org.in website: www.sums.org.in

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ANALYSIS REPORT OF GROUND WATER QUALITY

1. Name of the Location : Itikyala Village
2. Name of the Project : Kolimigundla Lime stone Mine
3. Name of the client : M/s. Sri Sainath minerals
4. Sample Collected By : Sai Universal Mining Services, Hospet
5. Particulars of Sample Collected by : Grab Sampling
6. Sampling Method : APHA 22nd Edition – 1060 B
7. Report to be Sent : 15.09.2016

Sl. No	Parameters	Protocol	Unit	Result	Standards As per IS : 10500:2012	
					DL	PL
1	Colour	APHA 22nd EDITION-2120 B	Hazen	<5	5	15
2	pH	APHA 22nd EDITION -4500 B	-	6.96	6.5-8.5	NR
3	Turbidity	APHA 22nd EDITION -2130 B	NTU	0.75	1	5
4	Conductivity	APHA 22nd EDITION – 2510 B	µmhos/cm	892	-	-
5	Total Dissolved Solids	APHA 22nd EDITION -2540 C	mg/l	508	500	2000
6	Total Alkalinity as $CaCO_3$	APHA 22nd EDITION – 2320 B	mg/l	248	200	600
7	Total Hardness as $CaCO_3$	APHA 22nd EDITION – 2340 C	mg/l	282	200	600
8	Calcium as Ca	APHA 22nd EDITION – 3500 B	mg/l	86	75	200
9	Magnesium as Mg	APHA22ndEDITION– 3500 B	mg/l	8.01	30	100
10	Sodium as Na	APHA 22nd EDITION -3500 B	mg/l	19.	-	-
11	Potassium as K	APHA 22nd EDITION -3500 B	mg/l	8.3	-	-
12	Iron as Fe	APHA 22nd EDITION -3500 B	mg/l	0.20	0.3	NR
13	Chlorides as Cl	APHA 22nd EDITION –4500 B	mg/l	130	250	1000
14	Sulphates as SO_4	APHA 22nd EDITION -4500 B	mg/l	14.2	200	400
15	Nitrates as NO_3	APHA 22nd EDITION–4500 E	mg/l	8.4	45	NR
16	Fluoride as F	APHA 22nd EDITION -4500 D	mg/l	0.65	1.0	1.5
17	Boron as B	APHA 22nd EDITION -4500 B	mg/l	0.72	1.0	5.0

Note: DL: Desirable Limit, PL: Permissible Limit NR: No Relaxation, BDL: Below Detectable Limit.

INFERENCE	Standards As per IS :10500:2012 Report Status: - measured values for all the parameters are within the standards.

ANALYSED BY

Sai Universal Mining Services Date

AUTHORISED SIGNATORY

See Note

Head Office : Plot No. 15-DP2, KIADB, Sankalapura Industrial Area, Near Water Tank, Ballari Main Road, Hosapete - 583 201. Ballari Dist., Karnataka, Cell: +91 94498 15560, +91 88844 94243, e-mail: sums.hpt@gmail.com, sumslaboratory@gmail.com, kpr@sums.org.in website: www.sums.org.in

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ANALYSIS REPORT OF GROUND WATER QUALITY

1. Name of the Location : Mirjapuram Village
2. Name of the Project : Kolimigundla Lime stone Mine
3. Name of the client : M/s. Sri Sainath minerals
4. Sample Collected By : Sai Universal Mining Services, Hospet
5. Particulars of Sample Collected by : Grab Sampling
6. Sampling Method : APHA 22nd Edition – 1060 B
7. Report to be Sent : 15.09.2016

Sl. No	Parameters	Protocol	Unit	Result	Standards As per IS : 10500:2012	
					DL	PL
1	Colour	APHA 22nd EDITION-2120 B	Hazen	<5	5	15
2	pH	APHA 22nd EDITION -4500 B	-	6.45	6.5-8.5	NR
3	Turbidity	APHA 22nd EDITION -2130 B	NTU	0.64	1	5
4	Conductivity	APHA 22nd EDITION – 2510 B	µmhos/cm	862	-	-
5	Total Dissolved Solids	APHA 22nd EDITION -2540 C	mg/l	483	500	2000
6	Total Alkalinity as $CaCO_3$	APHA 22nd EDITION – 2320 B	mg/l	232	200	600
7	Total Hardness as $CaCO_3$	APHA 22nd EDITION – 2340 C	mg/l	292	200	600
8	Calcium as Ca	APHA 22nd EDITION – 3500 B	mg/l	92	75	200
9	Magnesium as Mg	APHA22ndEDITION– 3500 B	mg/l	15.06	30	100
10	Sodium as Na	APHA 22nd EDITION -3500 B	mg/l	22.36	-	-
11	Potassium as K	APHA 22nd EDITION -3500 B	mg/l	10.5	-	-
12	Iron as Fe	APHA 22nd EDITION -3500 B	mg/l	0.21	0.3	NR
13	Chlorides as Cl	APHA 22nd EDITION –4500 B	mg/l	122	250	1000
14	Sulphates as SO_4	APHA 22nd EDITION -4500 B	mg/l	12.4	200	400
15	Nitrates as NO_3	APHA 22nd EDITION–4500 E	mg/l	7.5	45	NR
16	Fluoride as F	APHA 22nd EDITION -4500 D	mg/l	0.42	1.0	1.5
17	Boron as B	APHA 22nd EDITION -4500 B	mg/l	0.89	1.0	5.0

Note : DL : Desirable Limit, PL : Permissible Limit Note: NR: No Relaxation, BDL: Below Detectable Limit.

INFERENCE	Standards As per IS :10500:2012 Report Status: - measured values for all the parameters are within the standards.

ANALYSED BY

AUTHORISED SIGNATORY

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SAI UNIVERSAL MINING SERVICES

[Mining, Survey, Geology, Analytical & Environment]

NABL Accredited Laboratory Cert. No. T-2736

JAS-ANZ

ISO 9001:2008
ISO 14001:2004
OHSAS 18001:2007

ANALYSIS REPORT OF GROUND WATER QUALITY

1. Name of the Location : Kolimigundla Village
2. Name of the Project : Kolimigundla Lime stone Mine
3. Name of the client : M/s. Sri Sainath minerals
4. Sample Collected By : Sai Universal Mining Services, Hospet
5. Particulars of Sample Collected by : Grab Sampling
6. Sampling Method : APHA 22nd Edition – 1060 B
7. Report to be Sent : 15.09.2016

Sl. No	Parameters	Protocol	Unit	Result	Standards As per IS : 10500:2012	
					DL	PL
1	Colour	APHA 22nd EDITION-2120 B	Hazen	<5	5	15
2	pH	APHA 22nd EDITION -4500 B	-	7.16	6.5-8.5	NR
3	Turbidity	APHA 22nd EDITION -2130 B	NTU	0.69	1	5
4	Conductivity	APHA 22nd EDITION – 2510 B	µmhos/cm	910	-	-
5	Total Dissolved Solids	APHA 22nd EDITION -2540 C	mg/l	509	500	2000
6	Total Alkalinity as $CaCO_3$	APHA 22nd EDITION – 2320 B	mg/l	261	200	600
7	Total Hardness as $CaCO_3$	APHA 22nd EDITION – 2340 C	mg/l	301	200	600
8	Calcium as Ca	APHA 22nd EDITION – 3500 B	mg/l	90	75	200
9	Magnesium as Mg	APHA22ndEDITION– 3500 B	mg/l	18.46	30	100
10	Sodium as Na	APHA 22nd EDITION -3500 B	mg/l	14.2	-	-
11	Potassium as K	APHA 22nd EDITION -3500 B	mg/l	7.6	-	-
12	Iron as Fe	APHA 22nd EDITION -3500 B	mg/l	0.24	0.3	NR
13	Chlorides as Cl	APHA 22nd EDITION –4500 B	mg/l	134	250	1000
14	Sulphates as SO_4	APHA 22nd EDITION -4500 B	mg/l	16.3	200	400
15	Nitrates as NO_3	APHA 22nd EDITION–4500 E	mg/l	6.6	45	NR
16	Fluoride as F	APHA 22nd EDITION -4500 D	mg/l	0.53	1.0	1.5
17	Boron as B	APHA 22nd EDITION -4500 B	mg/l	1.1	1.0	5.0

Note : DL : Desirable Limit, PL : Permissible Limit Note: NR: No Relaxation, BDL: Below Detectable Limit

INFERENCE	Standards As per IS :10500:2012 Report Status: - measured values for all the parameters are within the standards.

ANALYSED BY

AUTHORISED SIGNATORY

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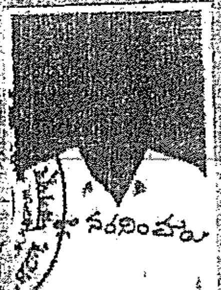
ANNEXURE- [illegible]

LICENCE FORM LE-3

(See article 3(a) to (d) of Part 1 of Schedule IV of Explosives Rules, 2008)

Licence to possess : (c) for use,explosives of class 1, 2,3,4,5,6 or 7 in a magazine



Licence No. : E/HQ/AP/22/647(E58304)
Annual Fee Rs.6500/-

1. Licence is hereby granted to : **ShriC.Narsimhulu (Occupier : ShriC.Narsimhulu)**
H.No.25-20, Kondapeta,Gooty Rd,Dhone,Kurnool, Kondapeta
District-KURNOOL, State-Andhra Pradesh, Pincode - 0
2. Status of licensee : **Individual**
3. Licence is valid only for the following purpose : possess for use of **Nitrate Mixture, Safety Fuse, Detonating Fuse, Detonator,**
4. (a) Licence is valid for the following kinds and quantity of explosives:

Sl. No.	Name and Description	Class & Division	Sub-division (if any)	Quantity at any one time
1.	Nitrate Mixture	2 0	0	2500 Kg.
2.	Safety Fuse	6 1	0	10000 Mtrs
3.	Detonating Fuse	6 2	0	10000 Mtrs
4.	Detonator	6 3	0	64000 Nos.

(b) Quantity of explosives to be purchased in a calendar month [illegible] article 3(b) and (c)] : **10 times as above.**

5. The licensed premises shall conform to the following drawing[illegible]
Drawing No - E/HQ/AP/22/647(E58304) dated : 09/04/2010
6. The licensed premises are situated at following address:
Survey No. 821 , Town/Village - Dharmavaram(V),[illegible]
Police Station : Dhone [illegible] State : **Andhra Pradesh**
PinCode : 0 Phone : [illegible] E-[illegible] Fax :
7. The licensed premises consist of following facilities - [illegible] & a detonator room.
8. The licence is granted subject to the provision of Explosives Act 1884 as amended from time to time and the Explosives Rules, 2008 framed there under and the conditions, additional conditions and the following [illegible]:
(1) Drawings (showing site, constructional and other details) as stated at serial No. 5 above.
(2) Conditions and Additional Conditions of this licence [illegible] by the licensing authority.
(3) Distance Form DE-2
9. This licence shall remain valid till **31st day of March, 2015.**

This licence is liable to be suspended or revoked for any [illegible] of the Act or Rules framed there under or the conditions of this licence as set forth under Set VIII, wherever applicable, referred to in Part 4 of Schedule [illegible] premises are not found conforming to the description shown in the plans and Annexure attached hereto.

The Date: 09/04/2010

Chief Controller of Explosives

Amendments :
- Amendment of Quantity of Explosives/Monthly Purchase Limit dated : 11/03/2011

Endorsements for renewal of licence:

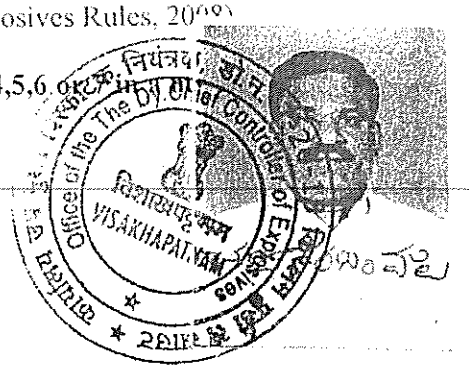
Date of Renewal	Date of Expiry	Signature of licensing authority

Statutory Warning : Mishandling and misuse of explosives shall constitute serious criminal offence under the law.

LICENCE FORM LE-3

(See article 3(a) to (d) of Part 1 of Schedule IV of Explosives Rules, 2008)

Licence to possess : (c) for use,explosives of class 1, 2,3,4,5,6 or



Licence No. : E/HQ/AP/22/647(E50304)
Annual Fee Rs:6800/-

1. Licence is hereby granted to : **ShriC.Narsimhulu (Occupier : ShriC.Narsimhulu) H.No.25-20, Kondapeta,Gooty Rd,Dhone,Kurnool.,**

   Town/Village - Kondapeta

   District-KURNOOL, State-Andhra Pradesh, Pincode - 0
2. Status of licensee : **Individual**
3. Licence is valid only for the following purpose : possess for use of **Nitrate Mixture, Safety Fuse, Detonating Fuse, Detonator,**
4. (a) Licence is valid for the following kinds and quantity of explosives:

Sr. No.	Name and Description	Class & Division	Sub-division (If any)	Quantity at any one time
1.	Nitrate Mixture	2 ,0	0	2500 Kg.
2.	Safety Fuse	6 ,1	0	10000 Mtrs
3.	Detonating Fuse	6 ,2	0	10000 Mtrs
4.	Detonator	6 ,3	0	44000 Nos.

   (b) Quantity of explosives to be purchased in a calendar month[applicable for licence under article 3(b) and (c)] : **20 times as above.**

5. The licensed premises shall conform to the following drawing(s):
   Drawing No : E/HQ/AP/22/647(E50304) dated : 09/04/2010
6. The licensed premises are situated at following address:
   Survey No. 821 , Town/Village : **Dharmavaram(V),Dhone(M)**
   Police Station : **Dhone** District : **KURNOOL** State : **Andhra Pradesh**
   PinCode : **0** Phone : E-Mail : Fax :
7. The licensed premises consist of following facilities : **A main magazine room a lobby & a detonator room**
8. The licence is granted subject to the provision of Explosives Act 1884 as amended from time to time and the Explosives Rules, 2008 framed there under and the conditions, additional conditions and the following Annexures.
   (1) Drawings (showing site, constructional and other details) as stated in serial No. 5 above.
   (2) Conditions and Additional Conditions of this licence signed by the licensing authority.
   (3) Distance Form DE-2
9. This licence shall remain valid till **31st day of March 2015**

This licence is liable to be suspended or revoked for any violation of the Act or Rules framed there under or the conditions of this licence as set forth under Set VIII, wherever applicable, referred to in Part 4 of Schedule V or if the licensed premises are not found conforming to the description shown in the plans and Annexure attached hereto.

03-03-2015

The Date: 09/04/2010

Sd/-
Chief Controller of Explosives

Amendments :

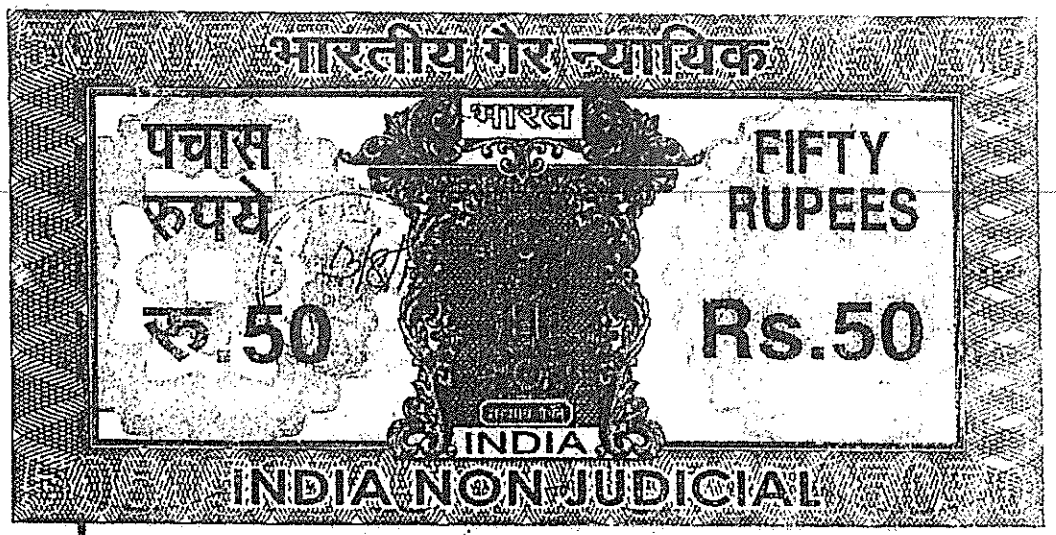
- Amendment of Quantity of Explosives/Monthly Purchase Limit dated : 11/03/2011
- Amendment of Quantity of Explosives/Monthly Purchase Limit dated : 31/10/2014

Endorsement for renewal of licence:

Date of Renewal	Date of Expiry	Signature of licensing authority
03/03/2015	31/03/2020	Dy. Chief Controller of Explosives, Visakhapatanam

Statutory Warning : Mishandling and misuse of explosives shall constitute serious criminal offence under the law.

ANNEXURE-XVII



ఆంధ్రప్రదేశ్ आन्ध्र प्रदेश ANDHRA PRADESH S 286146

Id To CHALLA NARASIMHULU S/o. CHALLA NARASIMHULU, DHONE.

rWhom SELF

AGREMENT OF BLASTING

This agreement is made and enter into on this 13th Day of August 2012.

BETWEEN:

C. NARASIMHULU, H.No. 25-20, Kondapeta, Gooty Road, DHONE town, Kurnool District. Here in after referred as Party of the FIRST PART).

AND

M/s Sri SAINATH MINERALS, Pro. P. BAYAPU REDDY, Kolimigundla (V & M), Kurnool Dist. In after referred as Party of the SECOND PART.

The party of the Second part is in receipt of permission by Asst. Director of Mines and Geology. Banaganipalli, vide proceeding No: 1360/M1/2006 Dated 15/11/2006. For Lime Stone over an Extent 4.048 Hects. In Sy.No:195/4A,2A & 195/4A, 3A, of Kolimigundla (V & M) Kurnool Dist.

Contd.. 2

M. Dhanunjaya Reddy M.A., B.L. P. Bayapu Reddy
ADVOCATE & NOTARY
Govt. of A.P. GOMs. No. 955
DHONE - 518 222.

Now the party of the Second part approached to the first party who is authorized explosive use license holder (Lic.No. E/HQ/AP/22/647 (E50304)) for execute blasting operations at above mentioned site.

WHEREAS the party of the first part will provide explosive use license No. E/HQ/AP/22/647 (E50304)

AND WHEREAS the both parties have agreed to enter into agreement to avoid any misunderstandings in future.

NOW THIS AGREEMENT WITNESSETH AS UNDER.

1. The party of first part shall provide the necessary copies of license and should maintain all records as per Explosives Rules.
2. Local/issues/Clearances will be borne by the second party.
3. The second party is responsible for the blasting operations.
4. If any problem occurred by Local/public/political issues should be solved by the second party and due to this any unexpected expenditure raised should be borne by the second party.
5. Any disputes arise on this agreement will be of Dhone Jurisdiction.

IN WITNESS WERE OF, the parties here to have signed these presents on the day, month and years first herein above mentioned in the presence of the following witnesses.

M/s C. NARASIMHULU

M M/s Sri SAINATH MINERALS,
Proprietor,
P. BAYAPU REDDY

WITNESSES:-

1. P. Nageshwar Reddy
2. C. Narasimhulu

M. [illegible] Reddy M.A., B.L.
ADVOCATE & NOTARY
Govt. of A.P. GOMs. No. 955
DHONE - 518 222.
Kurnool (Dist.) A.P

आंध्रप्रदेश आन्ध्र प्रदेश ANDHRA PRADESH

BV 951171

Sl No. 1034 Date 06/12/16 Rs. 100/-

Sold to M/s Sri Sainath Minerals, Prop. Bayapu Reddy,

For whom Kolimigundla (V) & (M), Kurnool District

G. N. Basha
SHAIK NOOR BASHA
License Stamp Vendor
L.No. 1117-14/2012,
R.No: 1117-10/2015
Almaspet, KADAPA. Cell: 9885058

BANK GUARANTEE FORMAT

Form No. _____
The Regional Controller of Mines,
Indian Bureau of Mines,

Dear Sirs,

ANDHRA PRAGATHI GRAMEENA BANK NESCO BRANCH BG 5/2016

Guarantee No. 5/2016
Amount of Guarantee Rs 200000/-
Guarantee Period from 6.12.2016
Last date for lodgment of claim 5.12.2022

This Deed of Guarantee executed on 6th day of Dec. 2016 by ANDHRA PRAGATHI GRAMEENA BANK, NESCO BRANCYH, KADAPA. (Bank Name) constituted under the _____ Act having its central office at _____ and amongst other places, a branch at _____ (hereinafter referred to as the Beneficiary) for an amount not exceeding Rs 2,00,000/- (Rupees Two Lakhs only) at the request of Sri Sainath Minerals, Kolimigundla, Kurnool District (hereinafter referred to as the Contractor/s).

This guarantee is issued subject to the condition that the liability of the Bank under this guarantee is limited to maximum 2 lakhs of Rs 2,00,000/- (Rupees Two lakhs only) and the guarantee shall remain in full force up to 5/12/2022 (date of expiry) and cannot be revoked on or before 5.12.2022 (last date of claim) by the Regional Controller of Mines, Indian Bureau of Mines, Hyderabad in writing.

SUBJECT TO AS AFORESAID

For ANDHRA PRAGATHI GRAMEENA BANK
For ANDHRA PRAGATHI GRAMEENA BANK,
NESCO BRANCH, KADAPA
(Seal)
Branch Manager

ఆంధ్రప్రదేశ్ आंध्र प्रदेश ANDHRA PRADESH 60AA 168636

Sl No. 10343 Date 6/12/16 Rs. 20/-

Sold to M/s Sri Sainatha Minerals, Prop. Bayapu Reddy

For whom Kolimigundla (V) (M), Kurnool Dist

S.N Basha

SHAIK NOOR BASHA

License Stamp Vendor

L.No. 1117-14/2012,

R.No: 1117-10/2015

Nimaspet, KADAPA. Cell: 9885058041.

BANK GUARANTEE AND CO-ACCEPTANCE BOND

1. Agreement on production of a Bank Guarantee for Rs 2,00,000/- (Rupees Two Lakhs only) under rule 23F of MCDR, 1988.

2. We ANDHRA PRAGATHI GRAMEENA BAK, NESCO BRANCH, KADAPA (Bank Name) at the request of Shri SAINATH MINERALS, Kolimigundla, Kurnool District (Lessee) do hereby undertake to pay to the Regional Controller of Mines, Indian Bureau of Mines, Hyderabad or any other officer authority nominated by the Controller General, Indian Bureau of Mines an amount not exceeding Rs2,00,000/- (Rupees Two lakhs only) against any loss or damage caused to or suffered or would be caused to or suffered by the Government or towards non compliance of provisions of Rs. 23A, B&23E of MCDR 1988 i.e., Mine closure plan / progressive Mine closure plan approved in respect of the mining lease for SRI SAINATH MINERALS (ore/ores) over an area of 4.048 Hects. Granted by State Government to Sri P. BAYAPUREDDY S/o P. Narasimha Reddy (Lessee) situated in Kolimigundla village Kolimigundla Taluka, Kurnool District, Andhra Pradesh State by reason of any breach o the said lessee of ay of the terms or conditions contained in the Mine closure plan / progressive mine closure plan.

ANDHRA PRAGATHI GRAMEENA BANK ★ NESCO BRANCH ★ KADAPA
BG
2016

For ANDHRA PRAGATHI GRAMEENA BANK

Manager

For ANDHRA PRAGATHI GRAMEENA BANK,
NESCO BRANCH, KADAPA

(Seal)

Branch Manager

ఆంధ్రప్రదేశ్ आंध्र प्रदेश ANDHRA PRADESH 60AA 168637

Sl No 10349 Date 5/12/16 Rs. 20/-

Sold to M/s Sri Sairath Minerals, Prop. Bayapu Reddy

For whom Kolimigundla (V) & (M), Kurnool Dist

S.N Basha
SHAIK NOOR BASHA
License Stamp Vendor
L.No. 1117-14/2012,
R.No: 1117-10/2015
Almaspet, KADAPA. Cell: 9885058041.

3. We, ANDHRA PRAGATHI GRAMEENA BANK, NESCO BRANCH, KADAPA. (Bank) do hereby undertake to pay the amount due and payable under this guarantee without nay demure, to the authority merely on a demand from the Regional Controller of Mines, India Bureau of Mines Hyderabad or any other authorized by the Controller General, Indian Bureau of Mines stating that the amount claimed is due by way of loss or loss of damage caused to or would be caused to or suffered by the Government by reason of breach by the said lessee or any of the terms and conditions contained in the mining plan / mining scheme or by reason of lessee's failure to perform the said mine closure plan / progressive mine closure plan. Any such demand made on the bank under this guarantee. However our liability under this guarantee shall be restricted to an amount not exceeding Rs2,00,000/-. (Rupees two lakhs only).

4. We undertake to pay to the authority on a demand from the Regional Controller of Mines, Indian Bureau of Mines, Hyderabad or any other officer authorized by the Controller General, Indian Bureau of Mines or Govt. of India any money so demanded notwithstanding any dispute or disputes raised by the lessee in any suit or proceedings pending before any court or tribunal relating thereto our liability under this present being absolute and unequivocal.
The payment so made by us under this bond shall be valid discharge of our liability for payment there under and lessee shall have no claim against us for making such payment.

BG 5/16

For ANDHRA PRAGATHI GRAMEENA BANK

Manager
NESCO BRANCH

भारतीय गैर न्यायिक

बीस रुपये

Rs.20

रु.20

TWENTY RUPEES

INDIA

INDIA NON JUDICIAL

ఆంధ్రప్రదేశ్ आंध्र प्रदेश ANDHRA PRADESH 60AA 168638

Sl No. 10345 Date 06/12/16 Rs. 20/-

Sold to M/s Sri Sainath Minerals, Prop. Bayapu Reddy

For whom Kolimigundla (V) & (M), Kurnool District.

S.N.Basha
SHAIK NOOR BASHA
License Stamp Vendor
L.No. 1117-14/2012,
R.No: 1117-10/2015
Almaspet, KADAPA. Cell: 9885058041.

5. We ANDHRA PRAGATHI GRAMEENA BANK, NESCO BRANCH, KADAPA. (Bank Name) further agree that the guarantee herein contained shall remain in full force and effect during the period from 6.12.2016 to 5.12.2022, Mining plan / scheme of Mining period of five years that would be taken for performance of the said Agreement and that shall continue to be enforceable till all the dues of the Govt. under or by virtue of the said agreement have been fully paid and its claims satisfied or discharge till Regional controller of Mines, Indian Bureau of Mines, Hyderabad or any other officers authorized by the Controller General, Indian Bureau of Mines certifies that the terms and conditions of the said progressive mine closure plan / final mine closure plan have been fully and property carried out by the said lessee and accordingly discharge this guarantee. Unless a demand or claim under this guarantee is made on us in writing on or before 5.12.2022, we will be discharged from all liability under this guarantee from all liability under this guarantee hereafter.

ANDHRA PRAGATHI GRAMEENA BANK NESCO BRANCH
BG No 5/2016

For ANDHRA PRAGATHI GRAMEENA BANK

Manager
NESCO BRANCH

ఆంధ్రప్రదేశ్ आंध्र प्रदेश ANDHRA PRADESH 60AA 168639

Sl No 0346 Dat 06/12/16 Rs. 20/-

Sold to M/s Sri Sainath Minerals, Prop. Bayapu Reddy

For whom Kolimigundla (V) & (M), Kurnool District

S. Nagabasha
SHAIK NOOR BASHA
License Stamp Vendor
L.No. 1117-14/2012,
R.No: 1117-10/2015
Almaspet, KADAPA. Cell: 9885058041.

6. We further agree that Regional Controller of Mines, Indian Bureau of Mines, Hyderabad or any other officer authorized by the Controller General, Indian Bureau of Mines, shall have fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said agreement or to extend time of performance by the said lessee from time to time or to postpone for any time or from time to time any powers exercisable by Regional Controller of Mines, Hyderabad against the said lessee and to forbear or enforce any of the terms and conditions relating to the said agreement, we (bank) shall not be relieved from our liability by reason of any such variation or extension being granted to the said lessee or for any forbearance, act or omission on the part of Regional Controller of Mines, Indian Bureau of Mines, Hyderabad or any indulgence by Regional Controller of Mines, Indian Bureau of Mines, Hyderabad to the said lessee or any manner or thing whatsoever which under the law relating to sureties would but this provisions have effect of so relieving us.

For ANDHRA PRAGATHI GRAMEENA BANK

ANDHRA PRAGATHI GRAMEENA BANK,
NESCO BRANCH, KADAPA
(Seal)
Branch Manager

7. This guarantee will not be discharged due to change in constitution of the bank or lessee.
8. We ANDHRA PRAGATHI GRAMEENA BANK, NESCO BRANCH, KADAPA. (Bank Name) lastly undertake not to revoke this guarantee during its currency except with the previous consent of the Regional Controller of Mines Indian Bureau of Mines, Hyderabad in writing.

For ANDHRA PRAGATHI GRAMEENA BANK

Manager

BG No 5/2016

भारतीय गैर न्यायिक

बीस रुपये

रु.20

Rs.20

TWENTY RUPEES

INDIA

INDIA NON JUDICIAL

ఆంధ్రప్రదేశ్ आंध्र प्रदेश ANDHRA PRADESH

60AA 168640

Sl No. 60347 Date 06/12/16 Rs. 20/-

Sold to M/s. Sainath minerals prop Bayapu kanr

For whom Kolimigundla(v) p.o. Kurnool Dist

SHAIK NOOR BASHA
License Stamp Vendor
L.No. 1117-14/2012,
R.No. 1117-10/2015
Almaspet, KADAPA. Cell: 9885058041.

9. Notwithstanding anything contained herein:

a) Our liability under this Bank Guarantee shall not exceed Rs 2,00,000/- (Rupees Two lakhs only)

b) The bank guarantee shall be valud upto 5.12.2022

c) The period of bank guarantee submitted is valid for the period of the proposal given in the mining plan / scheme of mining / PMCP etc. we are liable to pay the guarantee amount or any part thereof under this bank guarantee and only if served upon us a written claim or demand on or before.

10. If the bank guarantee is to be en-cashed through the court, in that case the (city where Regional Office IBM is located) court ill have jurisdiction.

11. In witness whereof, the bank through its authorized officer has set its hand and stamp on this 6th day of December 2016 at Kadapa.

ANDHRA PRAGATHI GRAMEENA BANK NESCO BRANCH (seal) BG No. 5/2016

For ANDHRA PRAGATHI GRAMEENA BANK

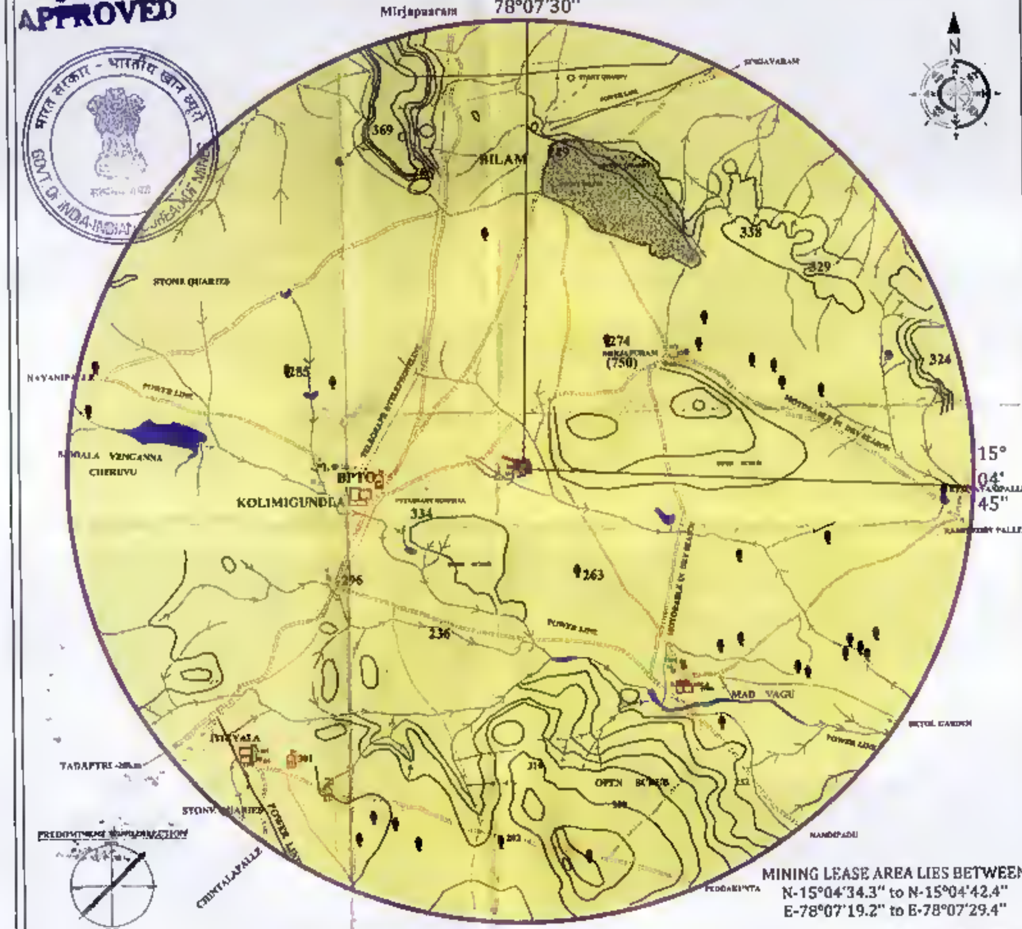
ANDHRA PRAGATHI GRAMEENA BANK,
NESCO BRANCH, KADAPA.
(Seal)
Branch Manager

PLATES

LIST OF PLATES

Sl. No.	Description	Plate No.	Scale
1	Key Plan	1	1:50,000
2	Lease Sketch	2	1":660'
3	Surface Plan	3	1: 1000
4	Geological Plan	4	1: 1000
5	Geological Sections	5	1: 1000
6	Production & Development Plans	6A-6E	1: 1000
7	Production and Development Sections	7	1: 1000
8	Conceptual Plan	8	1: 1000
9	Conceptual Sections	9	1: 1000
10	Environmental Plan	10	1: 5000
11	Reclamation Plan	11	1: 1000
12	Financial Area Assurance Plan	12	1: 1000

APPROVED



MINING LEASE AREA LIES BETWEEN
N-15°04'34.3" to N-15°04'42.4"
E-78°07'19.2" to E-78°07'29.4"

PLATE NO.1

TITLE	KEY PLAN	
PROJECT	KOLIMIGUNDLA LIMESTONE MINE	
LESSEE	M/s. SRI SAINATH MINERALS	
SCALE	1:50,000RF	EXTENT:- 4.048Ha TOPOSHEET No:- 57I/4
LOCATION	In Sy.No. 195/4A2A, 195/4A2B 195/4A3A(P) KOLIMIGUNDLA (VILLAGE & MANDAL) KURNOOL (DISTRICT) ANDHRA PRADESH (STATE)	

Certified that the above plan is correct to the best of my knowledge
Plans and sections are prepared based on the lease map authenticated by the State Government

PREPARED BY: K.PRABHAKARA REDDY
SAI UNIVERSAL MINING SERVICES

INDEX

- M.L.BOUNDARY
- CONTOUR
- GOVT LAND/ PATTA LAND
- 5KM CIRCLE
- ROAD
- APPROACH ROAD
- VILLAGE/SETTELMENT
- NALLHA
- WATER TANK
- STONY WASTE

INDEX

- Soil sample locations
- Water sample locations
- Air monitoring stations
- Noise monitoring stations

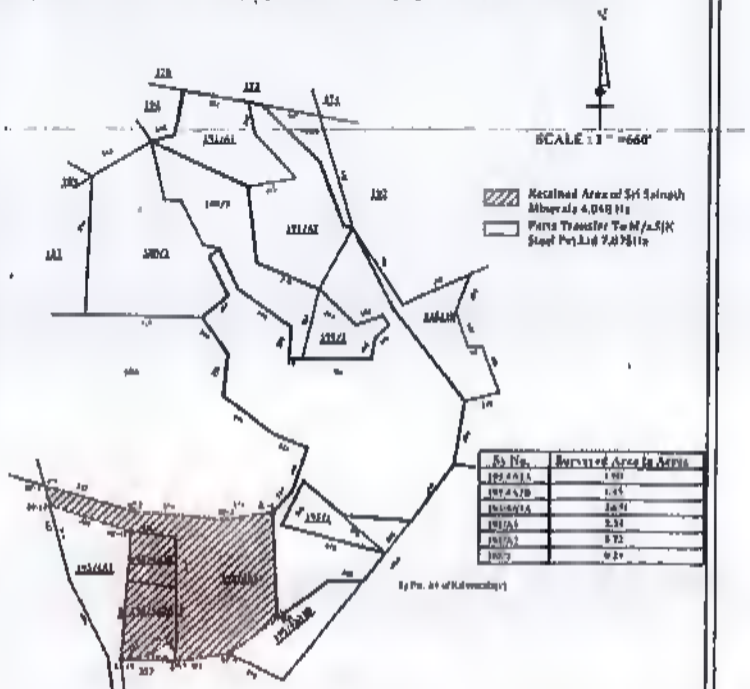
Village wise Population, Distance & Direction

Village	Population	Distance (Km)	Direction
MIRJAPURAM	750	2.11	NE
ITIKYALA	1000	4.30	SW
KALVADLA	900	2.91	SE
KOLIMIGUNDLA	1000	1.60	SW

PLATE NO.2

MINING LEASE GRANTED TO M/s. SRI SAINATH MINERALS EXTENT 4.048Ha (10.00Acres) IN PART OF SY. NO:-195/4A2A, 195/4A2B 195/4A3A(P) KOLIMIGUNDLA(V), KOLIMIGUNDLA (M), KURNOOL(D), ANDHRA PRADESH.

BOUNDARY PILLARS	LATITUDE	LONGITUDE
BP-1		
BP-2		
BP-3		
BP-4		
BP-5		
BP-6		
BP-7		
BP-8		
BP-9		
BP-10		
BP-11		
BP-12		



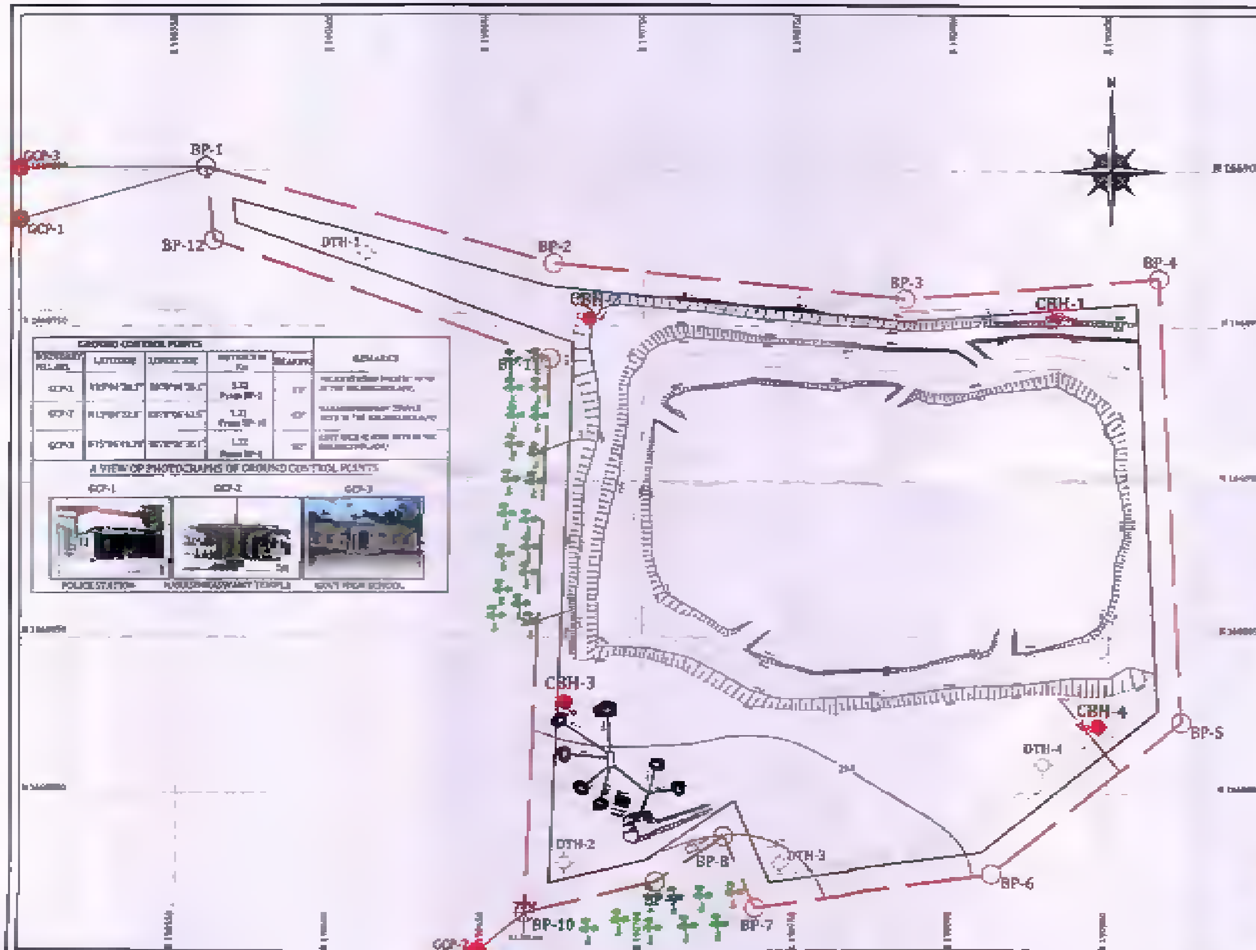
Sy No.	Survey of Area in Acres

Asst.Director of Mines & Geology Banaganapalle

APPROVED

C. Prasad 06/12/2011
Surveyor
O/o the A.D.M.&G.
Banganapalle

GOVT. OF INDIA INDIAN BUREAU OF MINES



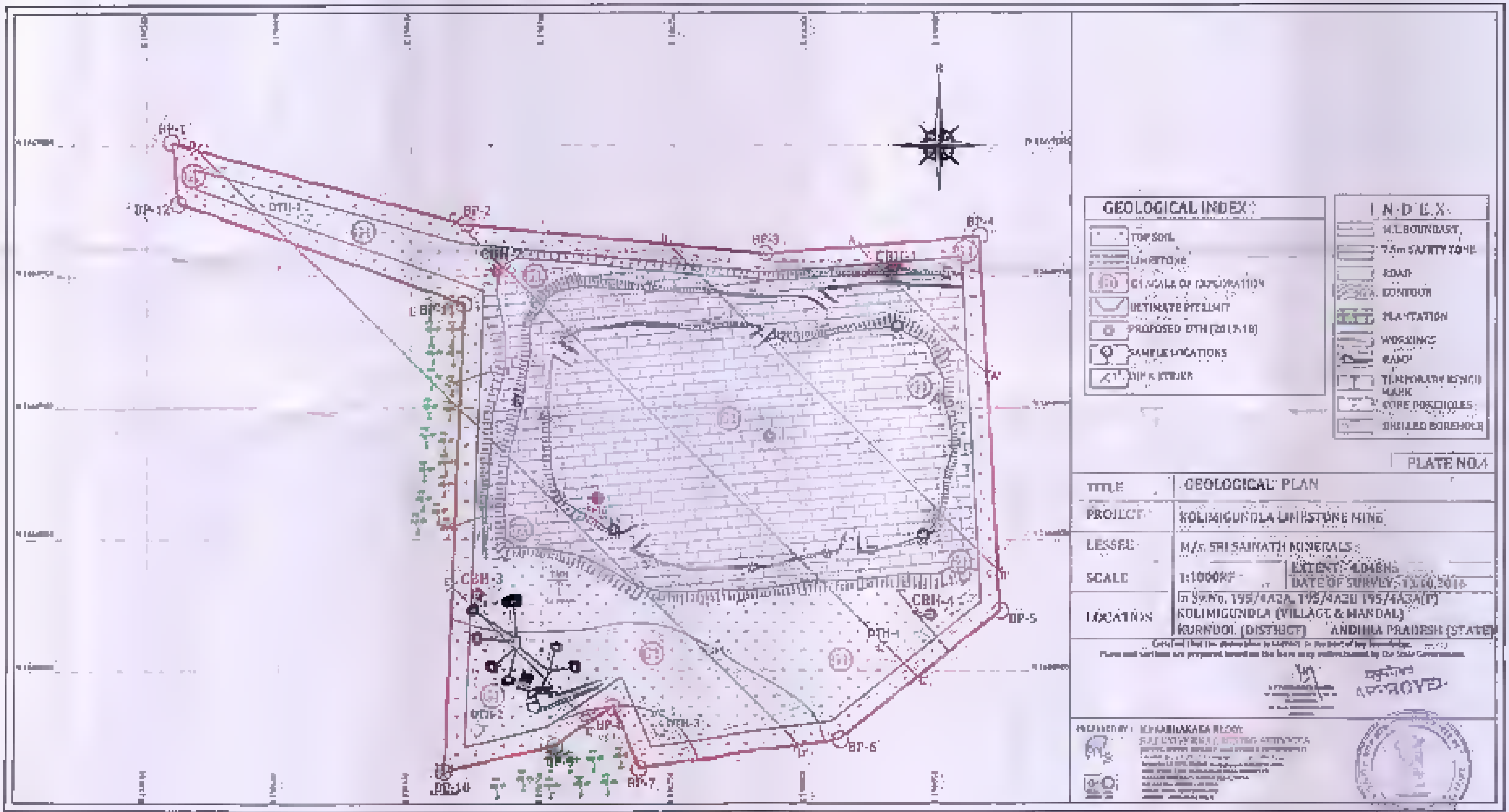
BOUNDARY PILLARS	LATITUDE	LONGITUDE
BP-1	N15°04'43.80"	E078°07'19.67"
BP-2	N15°04'42.08"	E078°07'21.68"
BP-3	N15°04'41.63"	E078°07'26.37"
BP-4	N15°04'40.90"	E078°07'29.68"
BP-5	N15°04'36.70"	E078°07'29.68"
BP-6	N15°04'40.90"	E078°07'26.98"
BP-7	N15°04'35.20"	E078°07'24.07"
BP-8	N15°04'36.10"	E078°07'23.68"
BP-9	N15°04'35.30"	E078°07'22.98"
BP-10	N15°04'34.90"	E078°07'20.47"
BP-11	N15°04'41.10"	E078°07'21.28"
BP-12	N15°04'42.60"	E078°07'19.28"
Datum WGS-1984		

PLATE NO.3

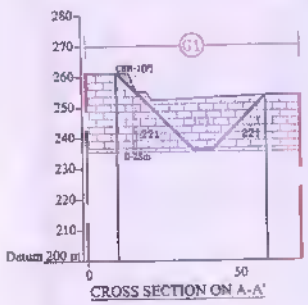
TITLE	SURFACE PLAN
PROJECT	KOLIMIGUNDLA LIMESTONE MINE
LESSEE	M/s. SRI SAINATH MINERALS
SCALE	1:1000RF — EXTENT :- 4.048Ha — DATE OF SURVEY :- 13.10.2016
LOCATION	In Sy.No. 195/4A2A, 195/4A2B 195/4A3A(P) KOLIMIGUNDLA (VILLAGE & MANDAL) KURNOOL (DISTRICT) ANDHRA PRADESH (STATE)

APPROVED

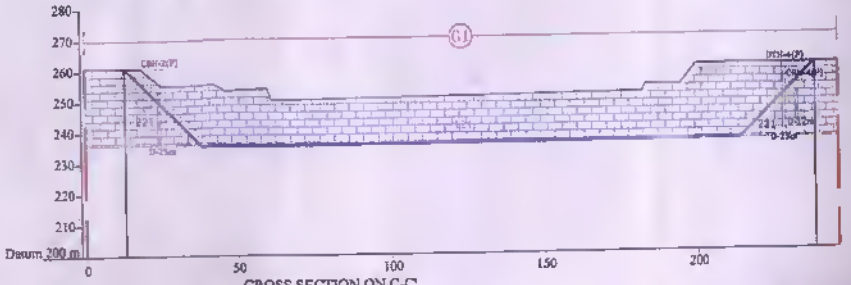
PREPARED BY : K.PRABHAKARA REDDY



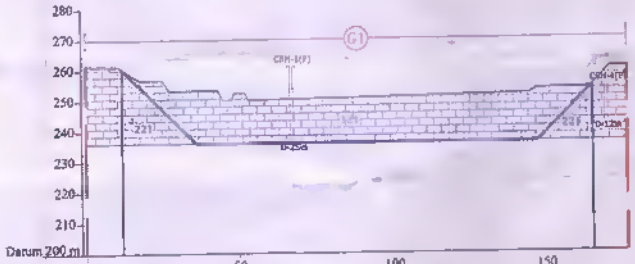
BP-1
BP-2
BP-4
BP-5
BP-6
BP-7
BP-10
BP-12
CBH-2
CBH-3
CBH-4
DTH-4
GEOLOGICAL INDEX :
TOP SOIL
PROPOSED DTH
SAMPLE LOCATIONS
I N D E X
ROAD
CONTOUR
PLANTATION
WORKINGS
RAMP
TEMPORARY BENCH MARK
DRILLED BOREHOLE
PLATE NO.4
TITLE
GEOLOGICAL PLAN
PROJECT
LESSEE
M/s. SRI SAINATH MINERALS
SCALE
EXTENT: 4.048Ha
DATE OF SURVEY
LOCATION
KOLIMIGUNDLA (VILLAGE & MANDAL)
KURNOOL (DISTRICT)
ANDHRA PRADESH (STATE)
APPROVED
PREPARED BY :



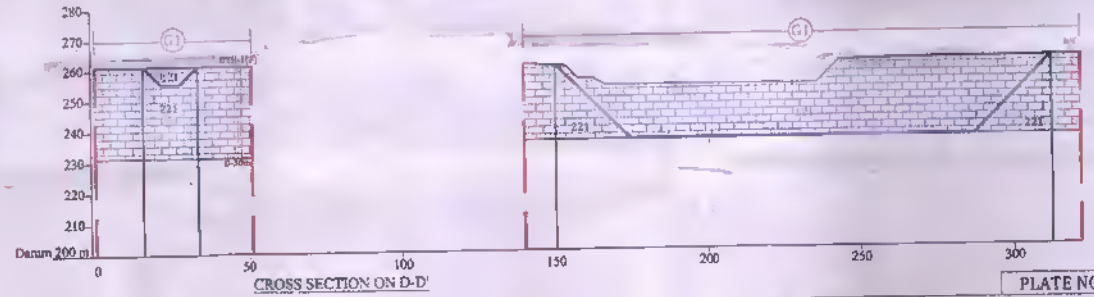
CROSS SECTION ON A-A'



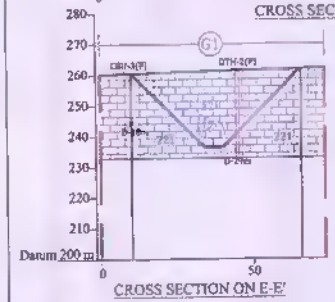
CROSS SECTION ON C-C'



CROSS SECTION ON B-B'



CROSS SECTION ON D-D'



CROSS SECTION ON E-E'

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M.L.BOUNDARY
7.5m SAFETY ZONE

GEOLOGICAL INDEX
TOP SOIL
LIMESTONE
DRILLED CORE & DTH BORE HOLES
G1 SCALE OF EXPLORATION
ULTIMATE PIT LIMIT

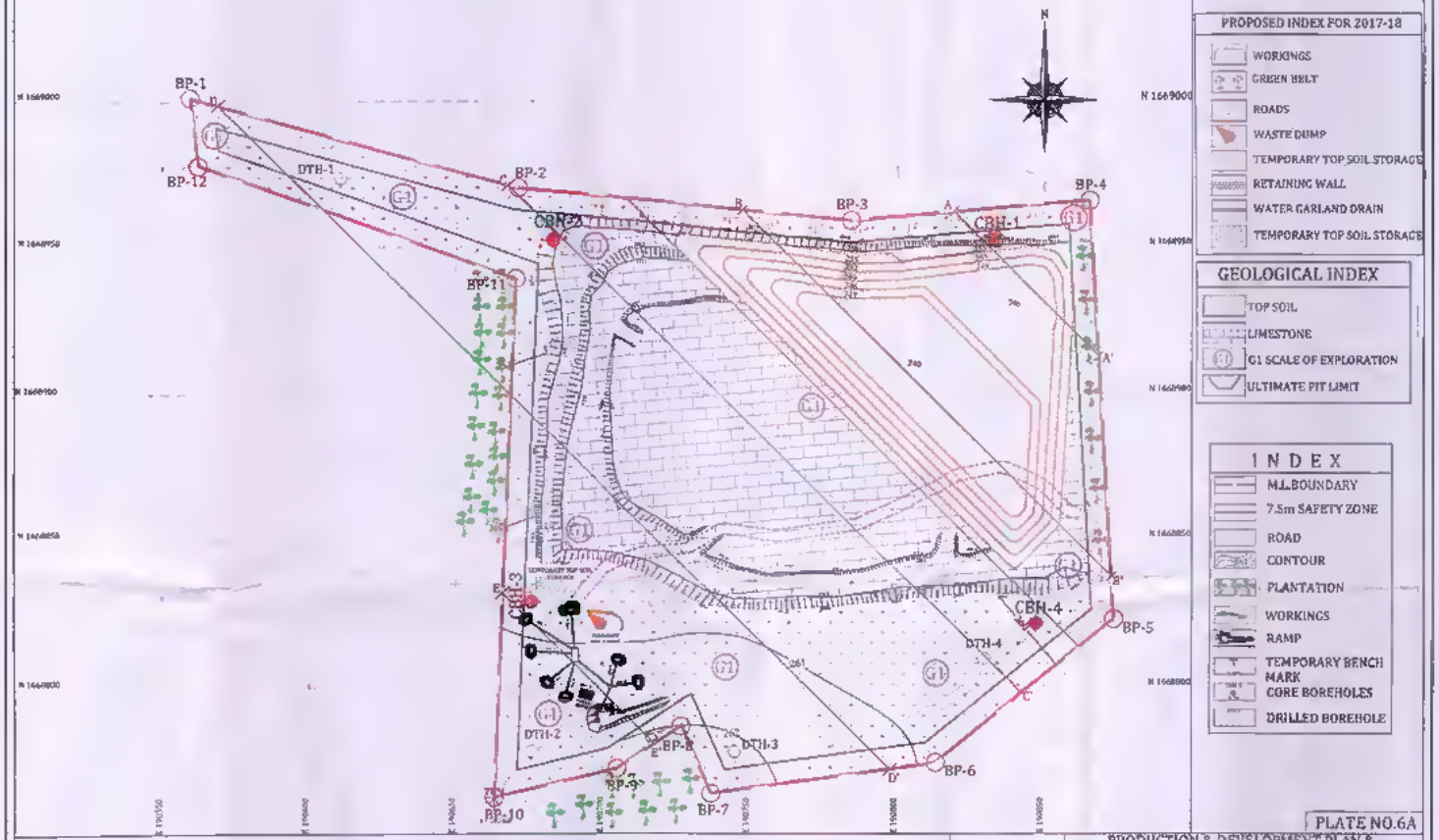
PLATE NO.5

TITLE	GEOLOGICAL CROSS SECTIONS
PROJECT	KOLIMIGUNDLA LIMESTONE MINE
LESSEE	M/s. SRI SAINATH MINERALS
SCALE	1:1000RF
	EXTENT:- 4.048Ha
	DATE OF SURVEY:-26.7.2016
LOCATION	In Sy.No. 195/4A2A, 195/4A2B 195/4A3A(P) KOLIMIGUNDLA (VILLAGE & MANDAL) KURNOOL (DISTRICT) ANDHRA PRADESH (STATE)

Certified that the above plan is correct to the best of my knowledge.
Plans and sections are prepared based on the lease map authenticated by the State Government.

APPROVED

PREPARED BY: K.PRABHAKARA REDDY
SRI UNIVERSAL MINING SERVICES



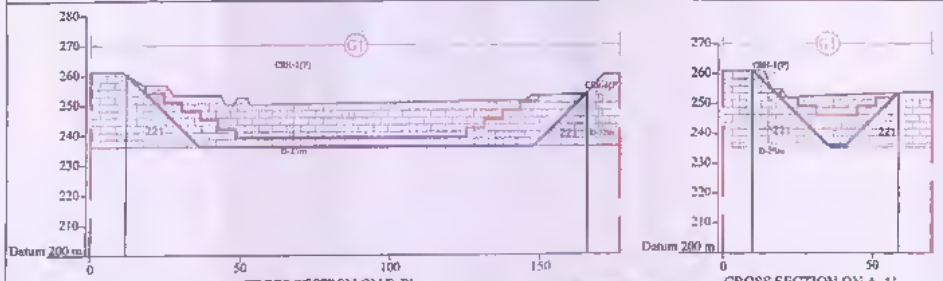


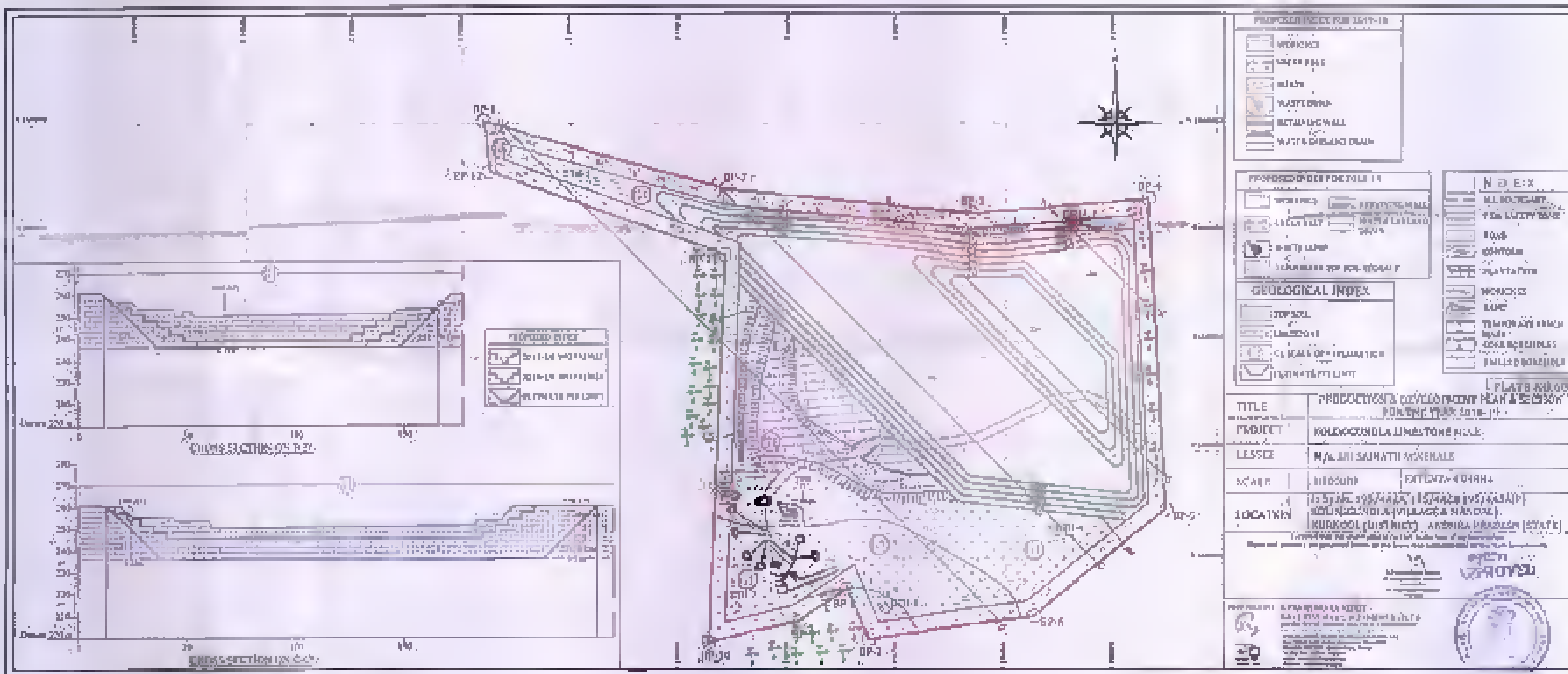
PLATE NO.6A

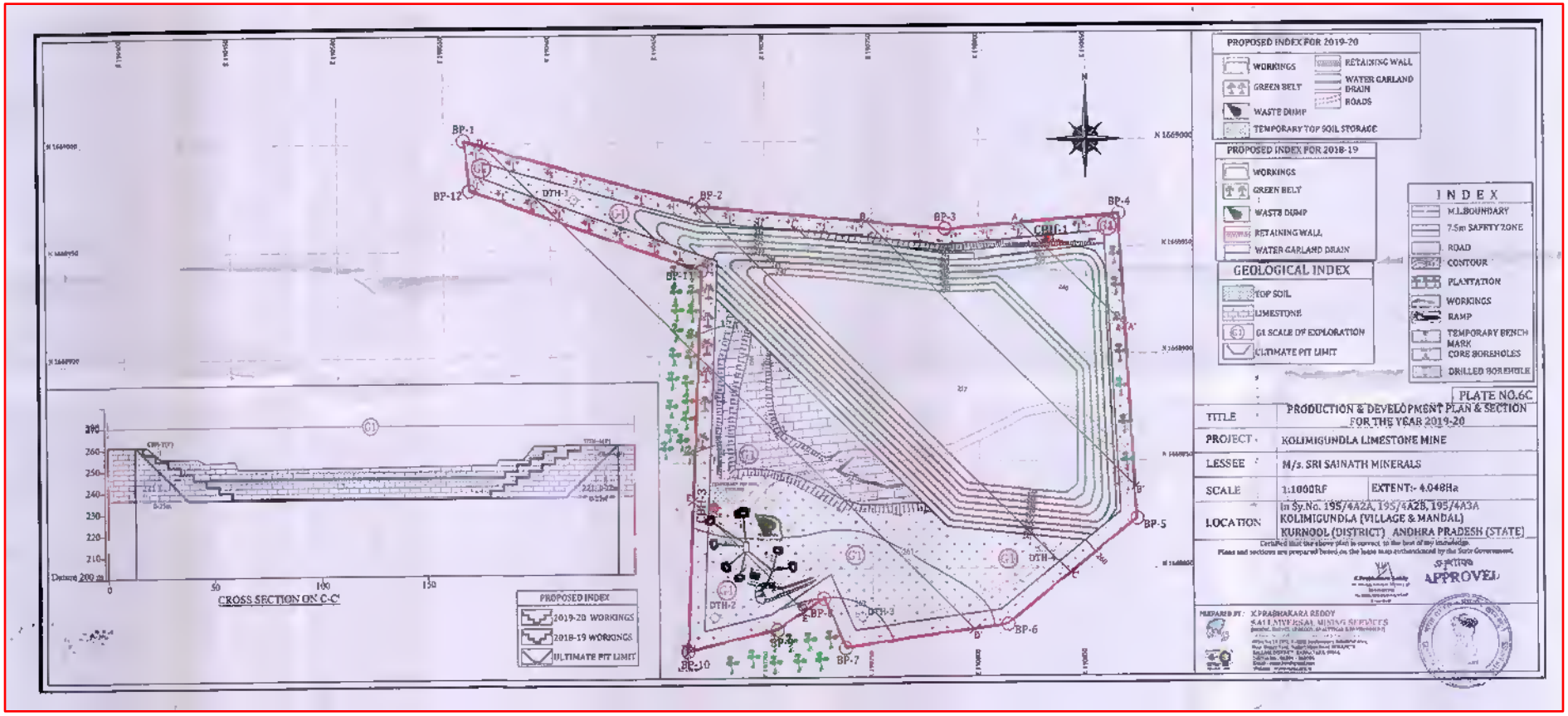
TITLE	PRODUCTION & DEVELOPMENT PLAN & SECTION FOR THE YEAR 2017-18
PROJECT	KOLIMIGUNDLA LIMESTONE MINE
LESSEE	M/s. SRI SAINATH MINERALS
SCALE	1:1000RF EXTENT:- 4.048Ha
LOCATION	In Sy.No. 195/4A2A, 195/4A2B 195/4A3A(P) KOLIMIGUNDLA (VILLAGE & MANDAL) KURNOOL (DISTRICT) ANDHRA PRADESH (STATE)

Certified that the above plan is correct to the best of my knowledge.
Plans and sections are prepared based on the lease map authenticated by the State Government.

APPROVED

PREPARED BY : K.PRABHAKARA REDDY


GEOLOGICAL INDEX
TITLE
LESSEE
SCALE
LOCATION
ANDHRA PRADESH (STATE)


PROPOSED INDEX FOR 2019-20
WORKINGS
GREEN BELT
WASTE DUMP
TEMPORARY TOP SOIL STORAGE
RETAINING WALL
WATER GARLAND DRAIN
ROADS
PROPOSED INDEX FOR 2018-19
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GREEN BELT
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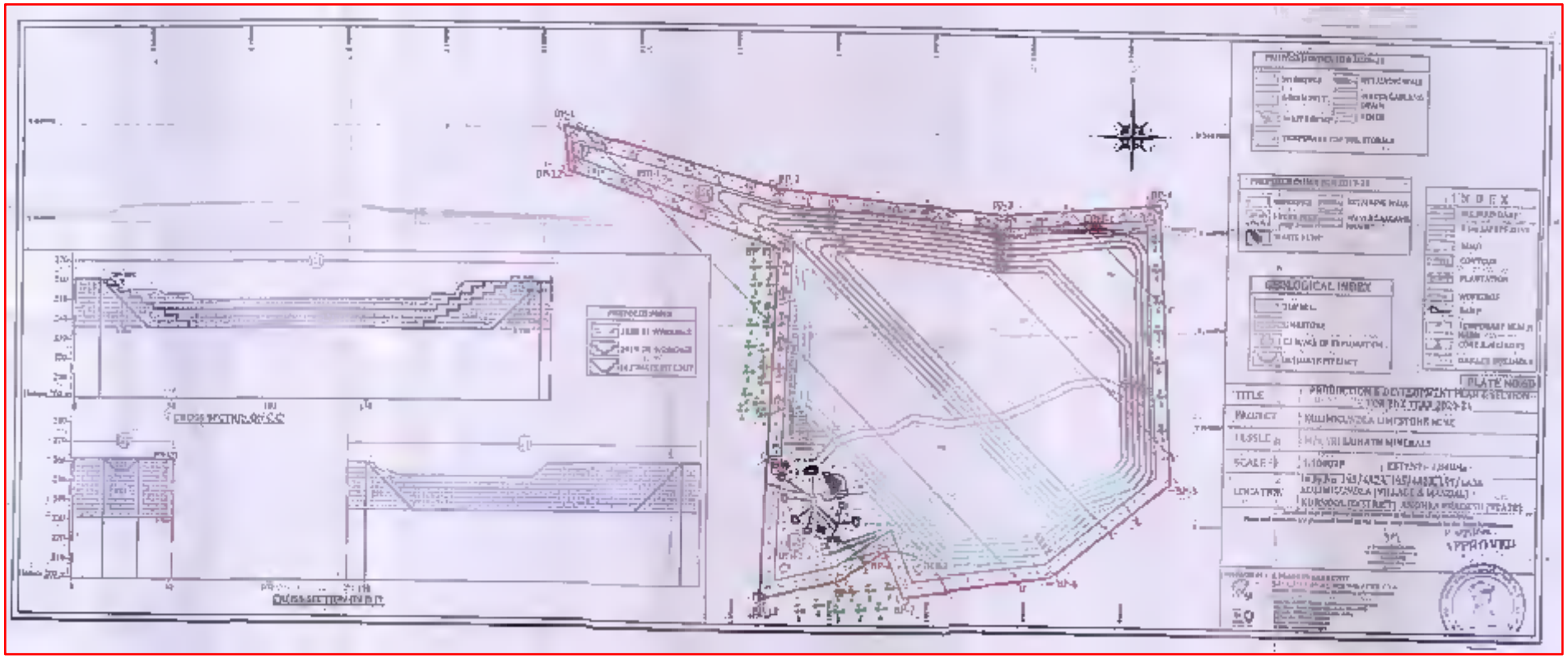
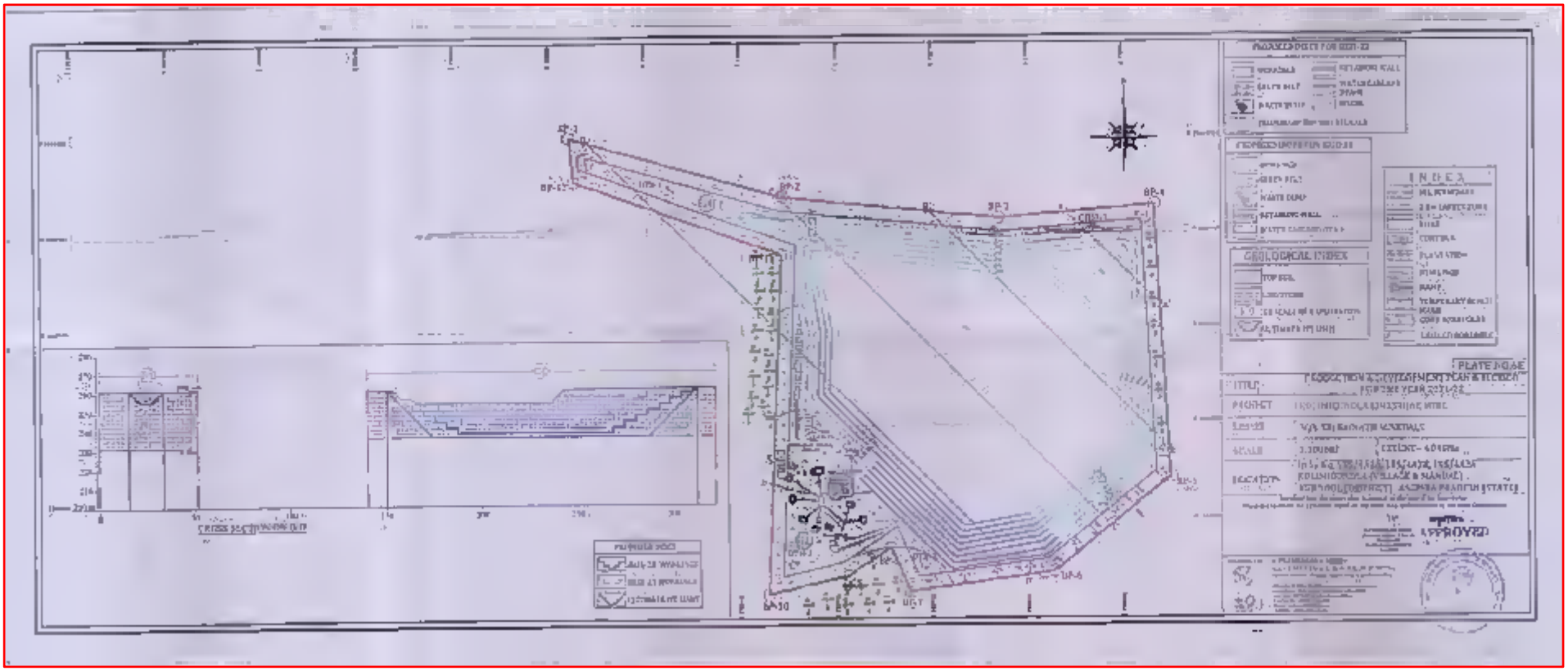
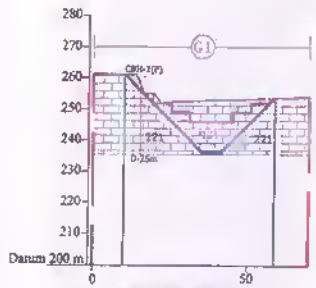
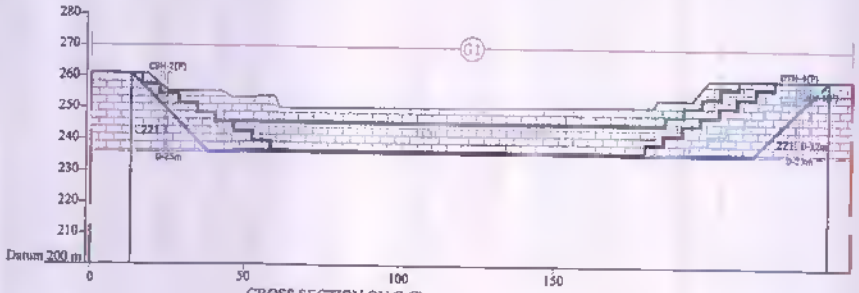
BP-2
BP-3
BP-4
BP-5
BP-6
BP-7
BP-8
BP-9
BP-10
BP-11
BP-12
DTH-1
DTH-2
DTH-3
DTH-4
CBH-1
CBH-3
CROSS SECTION ON C-C'
PROPOSED INDEX
2019-20 WORKINGS
2018-19 WORKINGS
ULTIMATE PIT LIMIT
PLATE NO.6C
TITLE : PRODUCTION & DEVELOPMENT PLAN & SECTION FOR THE YEAR 2019-20
PROJECT : KOLIMIGUNDLA LIMESTONE MINE
LESSEE : M/s. SRI SAINATH MINERALS
SCALE : 1:1000RF
EXTENT:- 4.048Ha
LOCATION : In Sy.No. 195/4A2A, 195/4A2B, 195/4A3A KOLIMIGUNDLA (VILLAGE & MANDAL) KURNOOL (DISTRICT) ANDHRA PRADESH (STATE)
APPROVED


INDEX
GEOLOGICAL INDEX
PLATE NO.02

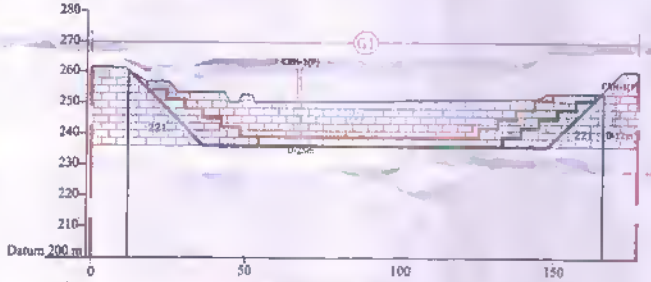




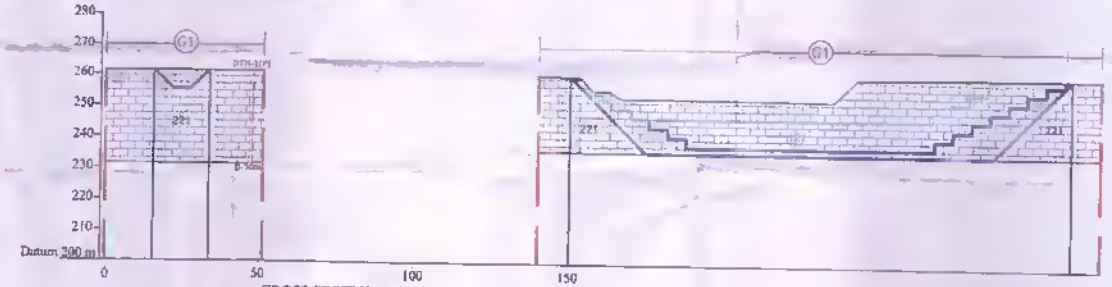
CROSS SECTION ON A-A'



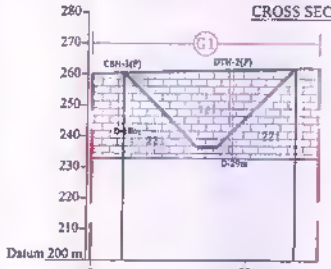
CROSS SECTION ON C-C'



CROSS SECTION ON B-B'



CROSS SECTION ON D-D'



CROSS SECTION ON E-E'

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ULTIMATE PIT LIMIT

YEAR-WISE WORKINGS
2017-18 WORKINGS
2018-19 WORKINGS
2019-20 WORKINGS
2020-21 WORKINGS
2021-22 WORKINGS

PLATE NO.7

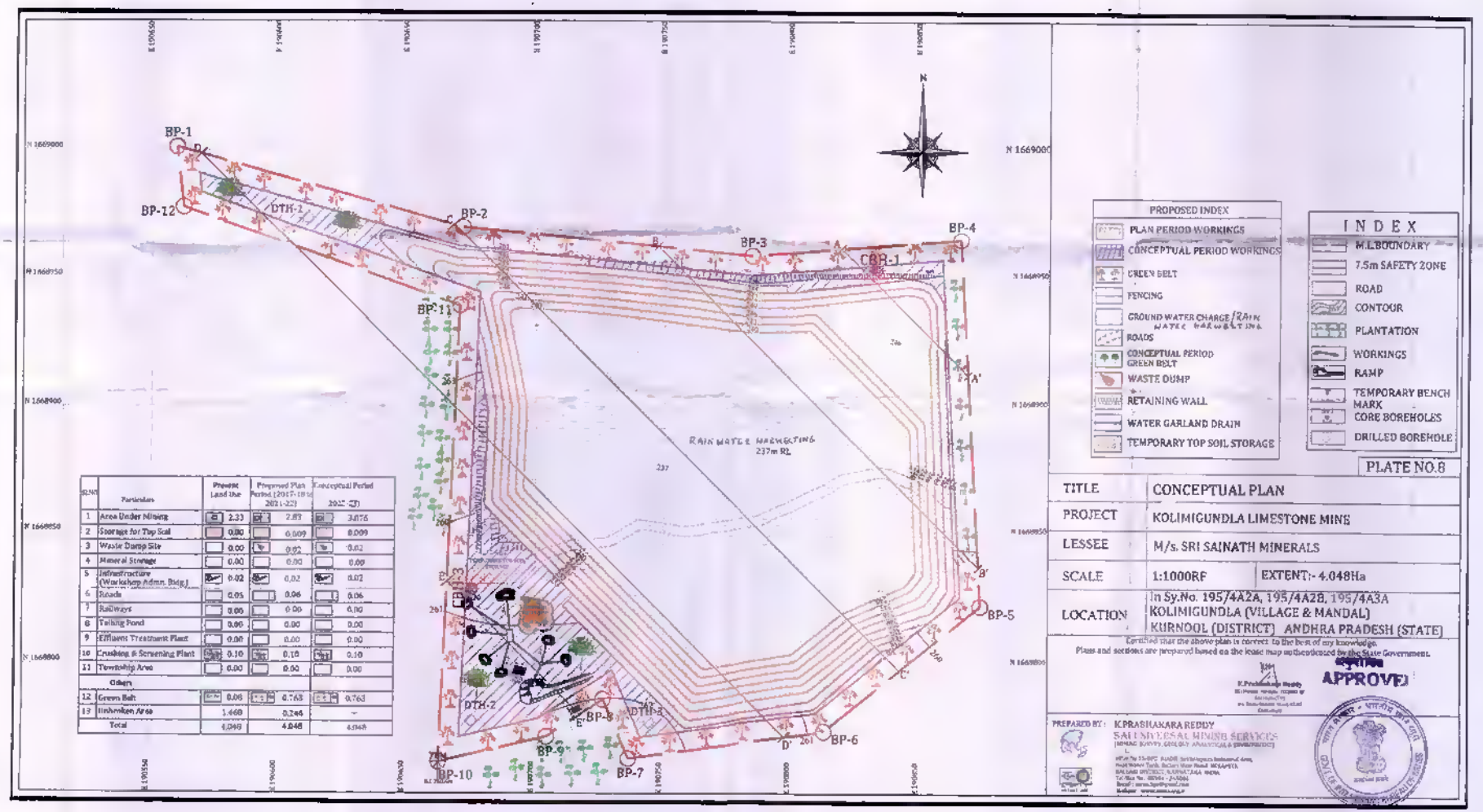
TITLE	PRODUCTION & DEVELOPMENT CROSS SECTIONS
PROJECT	KOLIMIGUNDLA LIMESTONE MINE
LESSEE	M/s. SRI SAINATH MINERALS
SCALE	1:1000RF EXTENT:- 4.048Ha
LOCATION	In Sy.No. 195/4A2A, 195/4A2B 195/4A3A(P) KOLIMIGUNDLA (VILLAGE & MANDAL) KURNOOL (DISTRICT) ANDHRA PRADESH (STATE)

Certified that the above plan is correct to the best of my knowledge.
Plans and sections are prepared based on the lease map authenticated by the State Government.

K.Prabhakara Reddy

APPROVED

PREPARED BY : K.PRABHAKARA REDDY
SAI UNIVERSAL MINING SERVICES



Sl.No	Particulars	Present Land Use	Proposed Plan Period (2017-18 to 2021-22)	Conceptual Period 2022 onwards
1	Area Under Mining	2.33	2.83	3.076
2	Storage for Top Soil	0.00	0.009	0.009
3	Waste Dump Site	0.00	0.02	0.02
4	Mineral Storage	0.00	0.00	0.00
5	Infrastructure (Workshop Admn. Bldg.)	0.02	0.02	0.02
6	Roads	0.05	0.06	0.06
7	Railways	0.00	0.00	0.00
8	Tailing Pond	0.00	0.00	0.00
9	Effluent Treatment Plant	0.00	0.00	0.00
10	Crushing & Screening Plant	0.10	0.10	0.10
11	Township Area	0.00	0.00	0.00
	Others			
12	Green Belt	0.06	0.763	0.763
13	Unbroken Area	1.469	0.246	-
	Total	4.048	4.048	4.048

PLATE NO.8

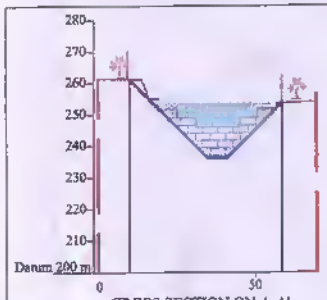
TITLE	CONCEPTUAL PLAN
PROJECT	KOLIMIGUNDLA LIMESTONE MINS
LESSEE	M/s. SRI SAINATH MINERALS
SCALE	1:1000RF EXTENT:- 4.048Ha
LOCATION	In Sy.No. 195/4A2A, 195/4A2B, 195/4A3A KOLIMIGUNDLA (VILLAGE & MANDAL) KURNOOL (DISTRICT) ANDHRA PRADESH (STATE)

Certified that the above plan is correct to the best of my knowledge.
Plans and sections are prepared based on the lease map authenticated by the State Government.

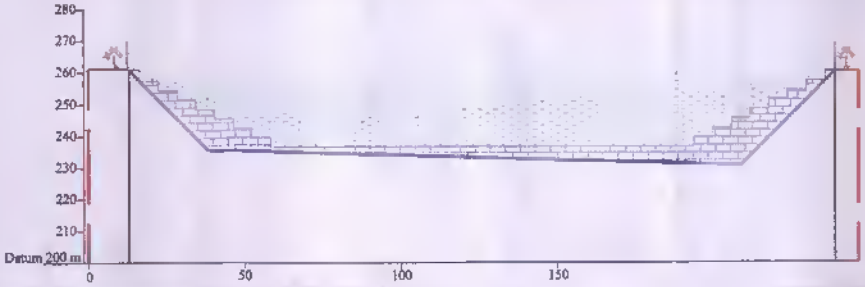
K.Prabhakara Reddy

APPROVED

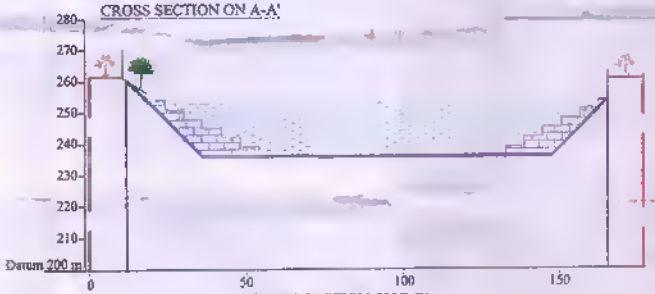
PREPARED BY : K.PRABHAKARA REDDY
SAI ENVIRO SAI MINING SERVICES



CROSS SECTION ON A-A'



CROSS SECTION ON C-C'



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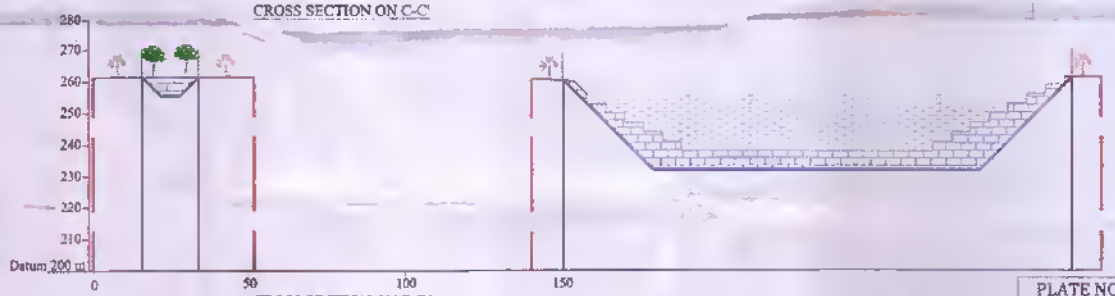
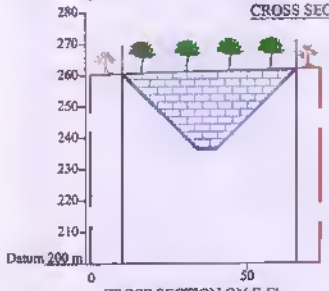


CROSS SECTION ON D-D'



CROSS SECTION ON E-E'

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- M.L.BOUNDARY
- 7.5m SAFETY ZONE
- LIMESTONE

PROPOSED INDEX

- SCHEME PERIOD GREEN BELT
- CONCEPTUAL PERIOD AFFORESTATION
- FENCING
- GROUND WATER CHARGE

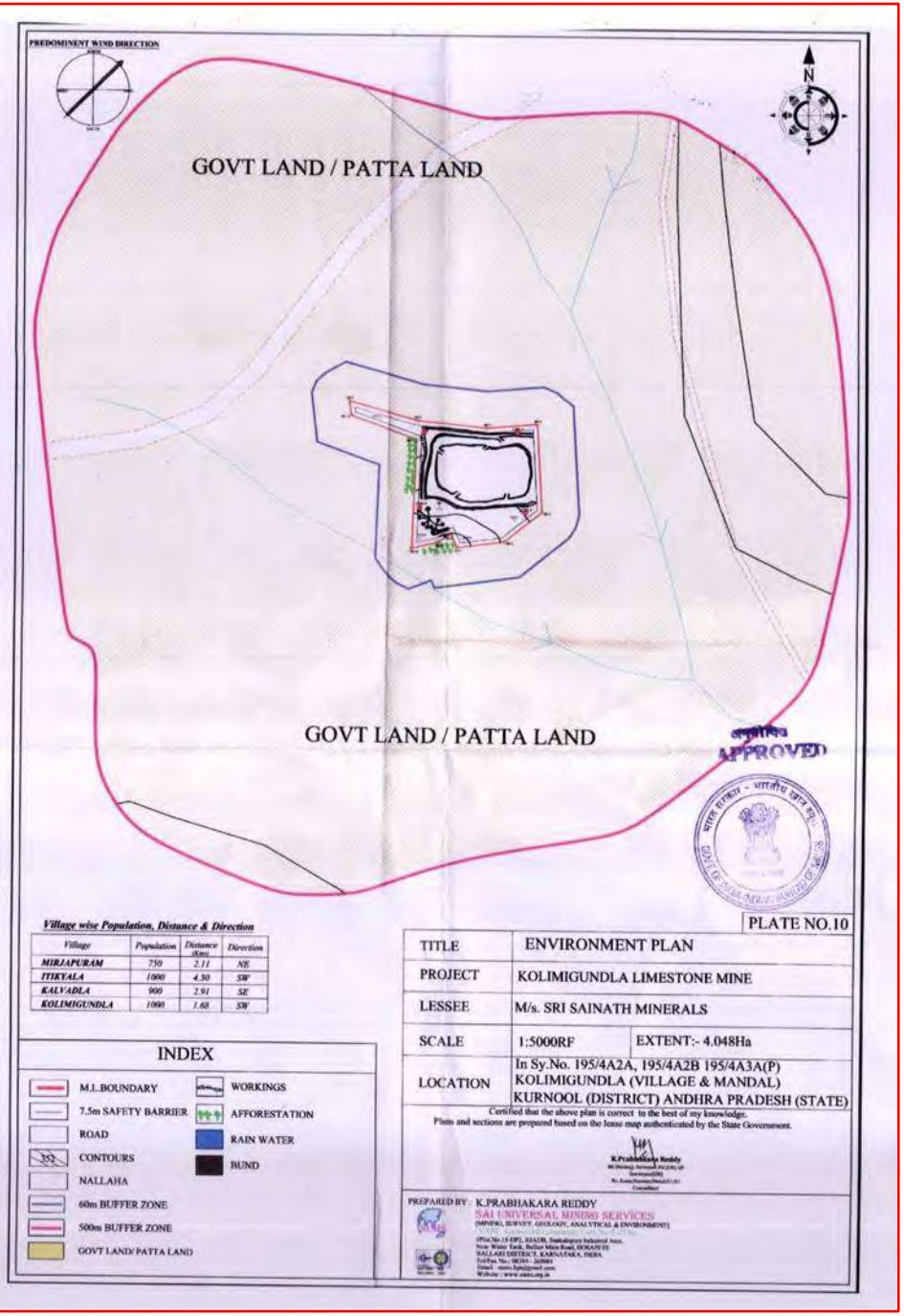
PLATE NO.9

TITLE	CONCEPTUAL SECTIONS
PROJECT	KOLIMIGUNDLA LIMESTONE MINE
LESSEE	M/s. SRI SAINATH MINERALS
SCALE	1:1000RP EXTENT:- 4.048Ha
LOCATION	In Sy.No. 195/4A2A, 195/4A2B, 195/4A3A KOLIMIGUNDLA (VILLAGE & MANDAL) KURNOOL (DISTRICT) ANDHRA PRADESH (STATE)

Certified that the above plan is correct to the best of my knowledge.
Plans and sections are prepared based on the lease map authenticated by the State Government.

APPROVED

PREPARED BY : K.PRABHAKARA REDDY
SAI ENVIRO SAI MINING SERVICES



Village wise Population, Distance & Direction

Village	*Population*	*Distance (Km)*	*Direction*
MIRJAPURAM	*750*	*2.11*	*NE*
TITKYALA	*1060*	*4.30*	*SW*
KALVADLA	*900*	*2.91*	*SE*
KOLIMIGUNDLA	*1000*	*1.68*	*SW*

INDEX

- M.L.BOUNDARY
- 7.5m SAFETY BARRIER
- ROAD
- CONTOURS (352)
- NALLAHA
- 60m BUFFER ZONE
- 500m BUFFER ZONE
- GOVT LAND/ PATTA LAND
- WORKINGS
- AFFORESTATION
- RAIN WATER
- BUND

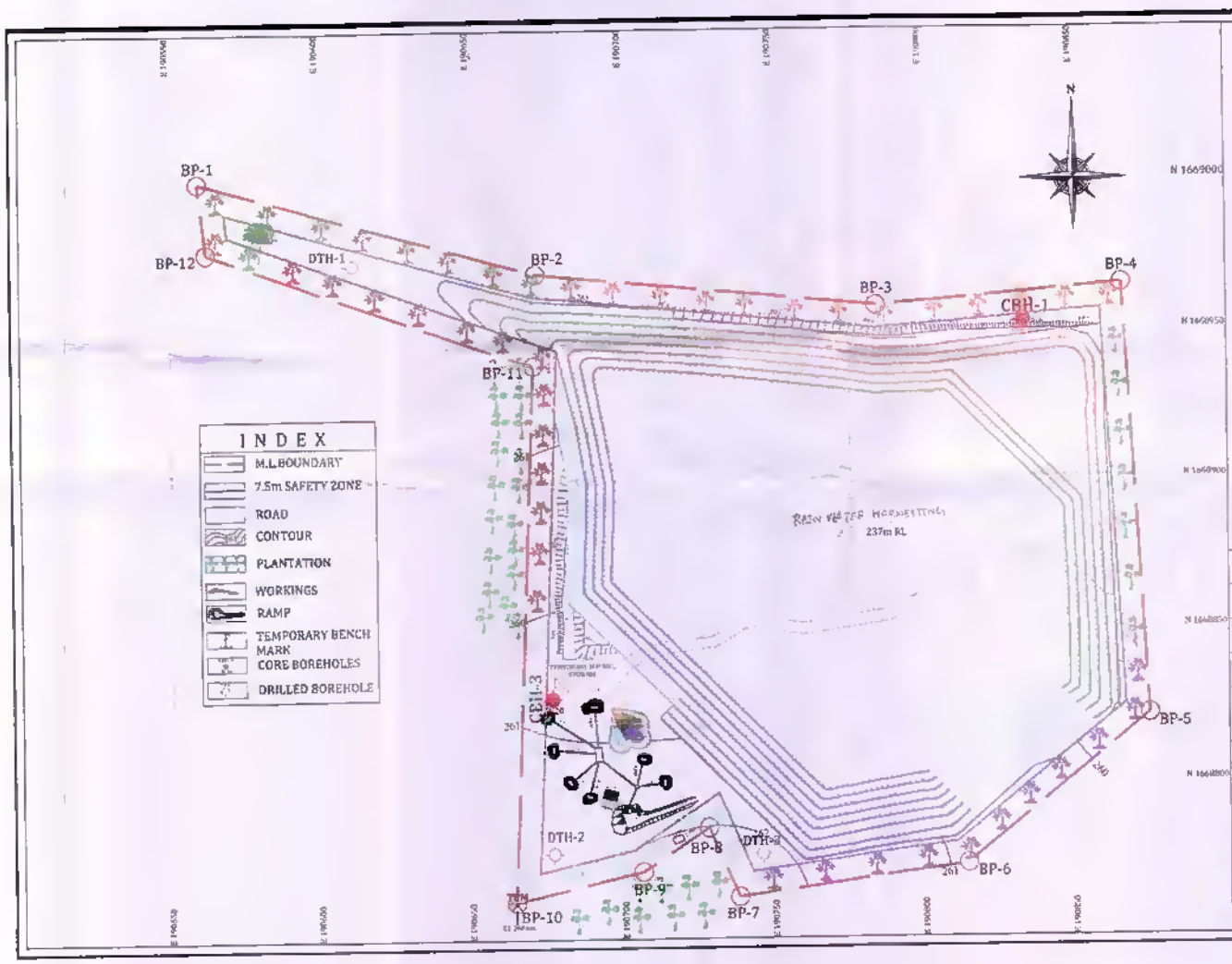
PLATE NO.10

TITLE	ENVIRONMENT PLAN	
PROJECT	KOLIMIGUNDLA LIMESTONE MINE	
LESSEE	M/s. SRI SAINATH MINERALS	
SCALE	1:5000RF	EXTENT:- 4.048Ha
LOCATION	In Sy.No. 195/4A2A, 195/4A2B 195/4A3A(P) KOLIMIGUNDLA (VILLAGE & MANDAL) KURNOOL (DISTRICT) ANDHRA PRADESH (STATE)	

Certified that the above plan is correct to the best of my knowledge.
Plans and sections are prepared based on the lease map authenticated by the State Government.

K.Prabhakara Reddy

PREPARED BY : K.PRABHAKARA REDDY
SAI UNIVERSAL MINING SERVICES
(MINING, SURVEY, GEOLOGY, ANALYTICAL & ENVIRONMENT)



PROPOSED INDEX

- GROUND WATER / SCHARGE/ RAIN WATER HARVESTING
- ROADS
- FENCING
- RETAINING WALL
- WATER GARLAND DRAIN

PROPOSED INDEX FOR SCHEME PERIOD

YEAR	WORKINGS	GREEN BELT	WASTE DUMP
2017-18			
2018-19			
2019-20			
2020-21			
2021-22			

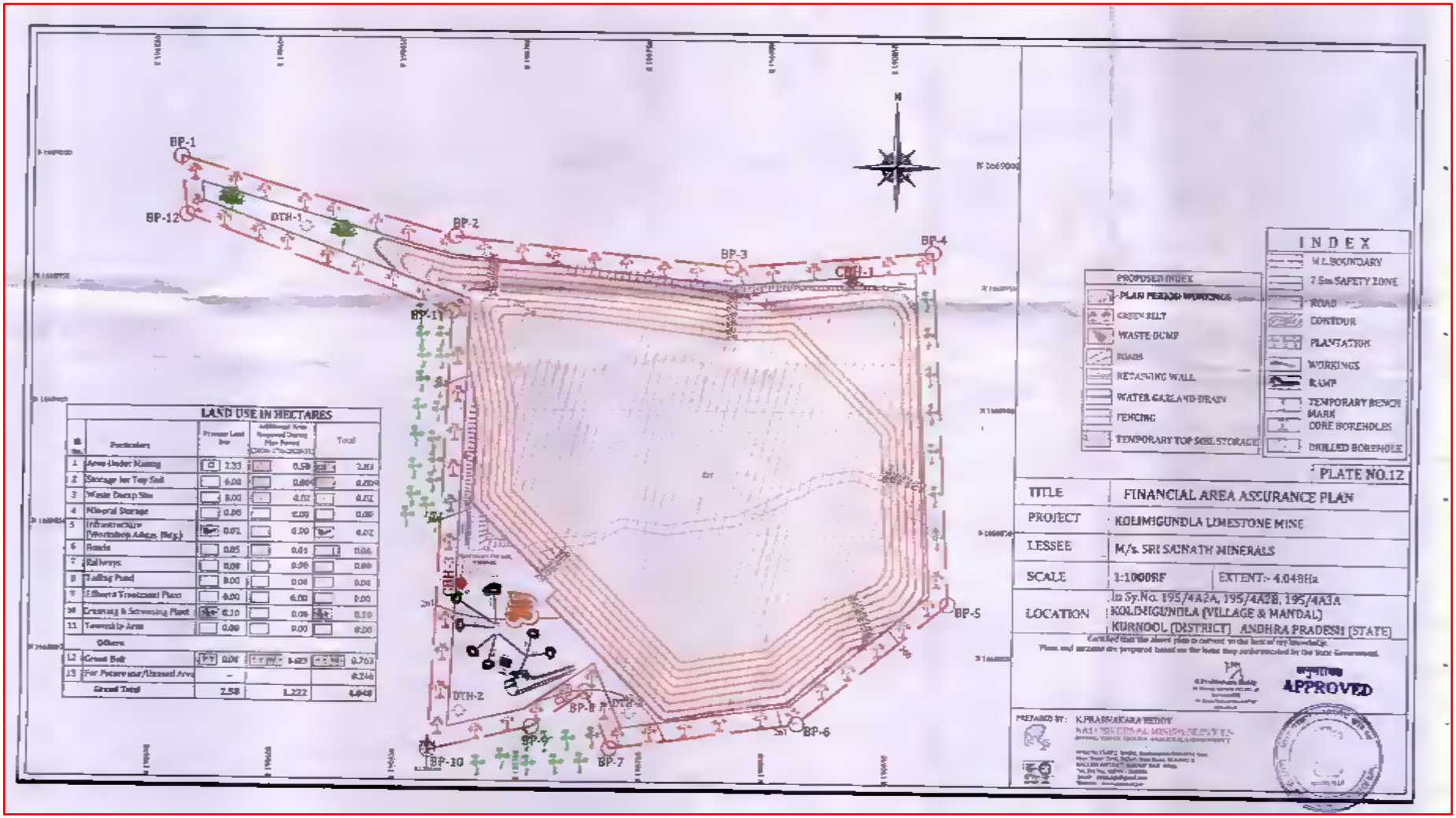
PLATE NO.11

TITLE	RECLAMATION PLAN	
PROJECT	KOLIMIGUNDLA LIMESTONE MINE	
LESSEE	M/s. SRI SAINATH MINERALS	
SCALE	1:1000RF	EXTENT:- 4.048Ha
LOCATION	In Sy.No. 195/4A2A, 195/4A2B, 195/4A3A KOLIMIGUNDLA (VILLAGE & MANDAL) KURNOOL (DISTRICT) ANDHRA PRADESH (STATE)	

Certified that the above plan is correct to the best of my knowledge.
Plans and sections are prepared based on the lease map authenticated by the State Government.

APPROVED

PREPARED BY : K.PRABHAKARA REDDY
SAI UNIVERSAL MINING SERVICES


BP-1
BP-2
BP-3
BP-4
BP-5
BP-6
BP-7
BP-8
BP-9
BP-10
BP-11
BP-12
DTH-1
DTH-2
CBH-1
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FENCING
TEMPORARY TOP SOIL STORAGE
LAND USE IN HECTARES
Particulars
Present Land Use
Additional Area Required During Plan Period
Total
1 Area Under Mining 2.33 0.50 2.83
2 Storage for Top Soil 0.00 0.00 0.00
3 Waste Dump Site 0.00 0.00 0.00
4 Mineral Storage 0.00 0.00 0.00
5 Infrastructure (Workshop Admn. Bldg.) 0.01 0.00 0.01
6 Roads 0.05 0.01 0.06
7 Railways 0.00 0.00 0.00
8 Tailing Pond 0.00 0.00 0.00
9 Effluent Treatment Plant 0.00 0.00 0.00
10 Crushing & Screening Plant 0.10 0.00 0.10
11 Township Area 0.00 0.00 0.00
Others
12 Green Belt 0.01 0.753 0.763
13 For Future use/Unused Area 0.246
Grand Total 2.50 1.222 4.049
PLATE NO.12
TITLE FINANCIAL AREA ASSURANCE PLAN
PROJECT KOLIMIGUNDLA LIMESTONE MINE
LESSEE M/s. SRI SAINATH MINERALS
SCALE 1:1000SF EXTENT:- 4.049Ha
LOCATION In Sy.No. 195/4A2A, 195/4A2B, 195/4A3A KOLIMIGUNDLA (VILLAGE & MANDAL) KURNOOL (DISTRICT) ANDHRA PRADESH (STATE)
APPROVED
PREPARED BY: K.PRABHAKARA REDDY