

ANNEXURE

For SIRUVALAI BLACK GRANITE QUARRY OVER AN EXTENT OF 20.28.0 Ha

**At
Survey No.: 170/1 (Part)
Siruvalai Village
Vikravandi Taluk
Villupuram District
Tamil Nadu State**

By



**M/s. Tamil Nadu Minerals Limited
No. 31, Kamarajar Salai
Chepauk
Chennai – 600 005**

**(Project termed under Schedule of 1(a) Mining of Minor Minerals
'B1' category as per EIA Notification 2006 and its Amendments &
Project falls under Violation category as per S.O. 804 (E) dated 14th
March 2017)**

**ToR File No.9982/SEAC/ToR-1483/2023 Dated: 22.06.2023
Baseline Period: March 2023- May 2023**



EIA Consultant & Laboratory

**M/s. HUBERT ENVIRO CARE SYSTEMS (P) LTD, CHENNAI
NABET Certificate No & Validity: NABET/EIA/24-27/RA 0335, valid up to 31.03.2027**

NABL Certificate No: TC-12310 Dated: 25.09.2023 Valid Till 24.09.2025

July 2024

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**THIRU.DEEPAK S.BILGI, I.F.S.,
MEMBER SECRETARY**

**STATE LEVEL ENVIRONMENT IMPACT
ASSESSMENT AUTHORITY – TAMIL NADU**

3rd Floor, Panagal Maaligai,
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Chennai-15.

Phone No. 044-24359973

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TERMS OF REFERENCE (ToR)

Lr No.SEIAA-TN/F.No.3888/SEAC/ToR-1533/2023 Dated:09.08.2023

To

M/s. Tamil Nadu Minerals Limited
31 Kamarajar Salai, Chepauk,
Chennai-600005,
Tamil Nadu.

Sir / Madam,

Sub: SEIAA, Tamil Nadu – Terms of Reference with Public Hearing (ToR) for the Existing Black Granite quarry lease over an extent of 20.28.0 Ha S.F.No. 170/1, Siruvalai Village, Villuppuram Taluk, Villuppuram District, Tamil Nadu by M/s. Tamil Nadu Minerals Limited - under project category – “B1” and Schedule S.No.1(a) of EIA Notification 2006, as amended – ToR issued along with Public Hearing – under violation category preparation of EIA report – Regarding.

Ref: 1. Online proposal No. SIA/TN/MIN/435461/2023, 30.06.2023.
2. Your application submitted for Terms of Reference dated:04.07.2023
3. Minutes of the 395th SEAC meeting held on 27.07.2023.
4. Minutes of the 645th SEIAA meeting held on 09.08.2023.

Kindly refer to your proposal submitted to the State Level Impact Assessment Authority for Terms of Reference.

The proponent, M/s. Tamil Nadu Minerals Limited has submitted application for Terms of Reference (ToR) in Form-I, Pre-Feasibility report for the Existing Black Granite quarry lease over an

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extent of 20.28.0 Ha S.F.No. 170/1, Siruvalai Village, Villuppuram Taluk, Villuppuram District, Tamil Nadu.

Discussion by SEAC and the Remarks:-

Existing Black Granite over an extent of 20.28.0 Ha S.F.No.170/1, Siruvalai Village, Villuppuram Taluk, Villuppuram District, Tamil Nadu by M/s.Tamil Nadu Minerals Limited - For Terms of Reference under violation category.

(SIA/TN/MIN/435461/2023, 30.06.2023)

The proposal was placed in this 395th meeting of SEAC held on 27.07.2023. The Project Proponent made a detailed presentation on the proposed project. The details of the project furnished by the proponent are available on the PARIVESH web portal (parivesh.nic.in).

The SEAC noted the following:

1. The Project Proponent, M/s. Tamil Nadu Minerals Limited has applied seeking Terms of Reference under violation category for EIA study for the Existing Black Granite over an extent of 20.28.0 Ha S.F.No.170/1, Siruvalai Village, Villuppuram Taluk, Villuppuram District, Tamil Nadu.
2. The proposed quarry/activity is covered under Category "B1" of Item 1(a) "Mining Projects" of the Schedule to the EIA Notification, 2006 as amended.

Based on the presentation and details furnished by the project proponent, SEAC decided to grant **Terms of Reference (ToR) with Public Hearing, restricting the ultimate working depth to 50m BGL and** subject to the following ToRs, in addition to (i) the standard terms of reference for EIA study shown in **Annexure-I** and (ii) the Standard ToR for non-coal mining projects and details issued by the MoEF&CC to be included in EIA/EMP Report:

- I. The PP shall furnish a comprehensive report based on the scientific studies carried out to assess the hydrogeological condition of the proposed quarry site and implication due to the quarrying activities, by involving **any one of the reputed Research and Academic Institutions** –
 - (i) CSIR-Central Institute of Mining & Fuel Research (CIMFR), Dhanbad,
 - (ii) National Institute of Rock Mechanics (NIRM), Bangalore,
 - (iii) Division of Geotechnical Engineering-IIT-Madras,
 - (iv) Dept of Mining Engg, National Institute of Technology (NITK), Surathkal,
 - (v) University of Madras – Centre for Environmental Sciences, Guindy Campus and
 - (vi) Anna University Chennai-Dept of Geology, CEG Campus.


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2. The PP shall provide the detailed information on implications due to the existence of Poultry farms and structures located within a radial distance of 1 km.
3. The PP shall provide the implications due to this unsymmetrical nature of this project, highly fragmented & non-contiguous in nature, on the existing two villages & Patta land located nearby and prepare a conceptual plan on systematic & scientific way of quarrying along with the required mitigation measures through adopting a 'Quarry Management System' for this project by involving **any one of these reputed Research and Academic Institutions** –
 - (i) CSIR-Central Institute of Mining & Fuel Research (CIMFR), Dhanbad,
 - (ii) National Institute of Rock Mechanics (NIRM), Bangalore,
 - (iii) Division of Geotechnical Engineering-IIT-Madras,
 - (iv) Dept of Mining Engg, National Institute of Technology (NITK), Surathkal, and
 - (v) Dept of Mining Engineering, CEG Campus, Anna University, Chennai.
4. The PP shall prepare a plan for installing a garland drainage around the periphery of the lease of proposed quarry.

Annexure-I

1. In the case of existing/operating mines, a letter obtained from the concerned AD (Mines) shall be submitted and it shall include the following:
 - (i) Original pit dimension
 - (ii) Quantity achieved Vs EC Approved Quantity
 - (iii) Balance Quantity as per Mineable Reserve calculated.
 - (iv) Mined out Depth as on date Vs EC Permitted depth
 - (v) Details of illegal/illicit mining
 - (vi) Violation in the quarry during the past working.
 - (vii) Quantity of material mined out outside the mine lease area
 - (viii) Condition of Safety zone/benches
 - (ix) Revised/Modified Mining Plan showing the benches of not exceeding 6 m height and ultimate depth of not exceeding 50m.
2. Details of habitations around the proposed mining area and latest VAO certificate regarding the location of habitations within 300m radius from the periphery of the site.
3. The proponent is requested to carry out a survey and enumerate on the structures located within the radius of (i) 50 m, (ii) 100 m, (iii) 200 m and (iv) 300 m (v) 500m shall be enumerated with details such as dwelling houses with number of occupants, whether it


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- belongs to the owner (or) not, places of worship, industries, factories, sheds, etc with indicating the owner of the building, nature of construction, age of the building, number of residents, their profession and income, etc.
4. The PP shall submit a detailed hydrological report indicating the impact of proposed quarrying operations on the waterbodies like lake, water tanks, etc are located within 1 km of the proposed quarry.
 5. The Proponent shall carry out Bio diversity study through reputed Institution and the same shall be included in EIA Report.
 6. The DFO letter stating that the proximity distance of Reserve Forests, Protected Areas, Sanctuaries, Tiger reserve etc., up to a radius of 25 km from the proposed site.
 7. In the case of proposed lease in an existing (or old) quarry where the benches are not formed (or) partially formed as per the approved Mining Plan, the Project Proponent (PP) shall the PP shall carry out the scientific studies to assess the slope stability of the working benches to be constructed and existing quarry wall, by involving any one of the reputed Research and Academic Institutions - CSIR-Central Institute of Mining & Fuel Research / Dhanbad, NIRM/Bangalore, Division of Geotechnical Engineering-IIT-Madras, NIT-Dept of Mining Engg, Surathkal, and Anna University Chennai-CEG Campus. The PP shall submit a copy of the aforesaid report indicating the stability status of the quarry wall and possible mitigation measures during the time of appraisal for obtaining the EC.
 8. However, in case of the fresh/virgin quarries, the Proponent shall submit a conceptual 'Slope Stability Plan' for the proposed quarry during the appraisal while obtaining the EC, when the depth of the working is extended beyond 30 m below ground level.
 9. The PP shall furnish the affidavit stating that the blasting operation in the proposed quarry is carried out by the statutory competent person as per the MMR 1961 such as blaster, mining mate, mine foreman, II/I Class mines manager appointed by the proponent.
 10. The PP shall present a conceptual design for carrying out only controlled blasting operation involving line drilling and muffle blasting in the proposed quarry such that the blast-induced ground vibrations are controlled as well as no fly rock travel beyond 30 m from the blast site.
 11. The EIA Coordinators shall obtain and furnish the details of quarry/quarries operated by the proponent in the past, either in the same location or elsewhere in the State with video and photographic evidences.


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12. If the proponent has already carried out the mining activity in the proposed mining lease area after 15.01.2016, then the proponent shall furnish the following details from AD/DD, mines,
 - Highest production achieved in any one year
 - Detail of approved depth of mining.
 - Actual depth of the mining achieved earlier.
 - Name of the person already mined in that leases area.
 - If EC and CTO already obtained, the copy of the same shall be submitted.
 - Whether the mining was carried out as per the approved mine plan (or EC if issued) with stipulated benches.
13. What was the period of the operation and stoppage of the earlier mines with last work permit issued by the AD/DD mines?
14. Quantity of minerals mined out.
15. All corner coordinates of the mine lease area, superimposed on a High-Resolution Imagery/Topo sheet, topographic sheet, geomorphology, lithology and geology of the mining lease area should be provided. Such an Imagery of the proposed area should clearly show the land use and other ecological features of the study area (core and buffer zone).
16. The PP shall carry out Drone video survey covering the cluster, green belt, fencing, etc.,
17. The proponent shall furnish photographs of adequate fencing, green belt along the periphery including replantation of existing trees & safety distance between the adjacent quarries & water bodies nearby provided as per the approved mining plan.
18. The Project Proponent shall provide the details of mineral reserves and mineable reserves, planned production capacity, proposed working methodology with justifications, the anticipated impacts of the mining operations on the surrounding environment, and the remedial measures for the same.
19. The Project Proponent shall provide the Organization chart indicating the appointment of various statutory officials and other competent persons to be appointed as per the provisions of the Mines Act'1952 and the MMR, 1961 for carrying out the quarrying operations scientifically and systematically in order to ensure safety and to protect the environment.
20. The Project Proponent shall conduct the hydro-geological study considering the contour map of the water table detailing the number of groundwater pumping & open wells, and surface water bodies such as rivers, tanks, canals, ponds, etc. within 1 km (radius) along

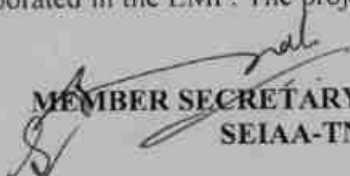

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with the collected water level data for both monsoon and non-monsoon seasons from the PWD / TWAD so as to assess the impacts on the wells due to mining activity. Based on actual monitored data, it may clearly be shown whether working will intersect groundwater. Necessary data and documentation in this regard may be provided.

21. The proponent shall furnish the baseline data for the environmental and ecological parameters with regard to surface water/ground water quality, air quality, soil quality & flora/fauna including traffic/vehicular movement study.
22. The Proponent shall carry out the Cumulative impact study due to mining operations carried out in the quarry specifically with reference to the specific environment in terms of soil health, biodiversity, air pollution, water pollution, climate change and flood control & health impacts. Accordingly, the Environment Management plan should be prepared keeping the concerned quarry and the surrounding habitations in the mind.
23. Rain water harvesting management with recharging details along with water balance (both monsoon & non-monsoon) be submitted.
24. Land use of the study area delineating forest area, agricultural land, grazing land, wildlife sanctuary, national park, migratory routes of fauna, water bodies, human settlements and other ecological features should be indicated. Land use plan of the mine lease area should be prepared to encompass preoperational, operational and post operational phases and submitted. Impact, if any, of change of land use should be given.
25. Details of the land for storage of Overburden/Waste Dumps (or) Rejects outside the mine lease, such as extent of land area, distance from mine lease, its land use, R&R issues, if any, should be provided.
26. Proximity to Areas declared as 'Critically Polluted' (or) the Project areas which attracts the court restrictions for mining operations, should also be indicated and where so required, clearance certifications from the prescribed Authorities, such as the TNPCB (or) Dept. of Geology and Mining should be secured and furnished to the effect that the proposed mining activities could be considered.
27. Description of water conservation measures proposed to be adopted in the Project should be given. Details of rainwater harvesting proposed in the Project, if any, should be provided.
28. Impact on local transport infrastructure due to the Project should be indicated.


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29. A tree survey study shall be carried out (nos., name of the species, age, diameter etc.,) both within the mining lease applied area & 300m buffer zone and its management during mining activity.
30. A detailed mine closure plan for the proposed project shall be included in EIA/EMP report which should be site-specific.
31. As a part of the study of flora and fauna around the vicinity of the proposed site, the EIA coordinator shall strive to educate the local students on the importance of preserving local flora and fauna by involving them in the study, wherever possible.
32. The purpose of Green belt around the project is to capture the fugitive emissions, carbon sequestration and to attenuate the noise generated, in addition to improving the aesthetics. A wide range of indigenous plant species should be planted as given in the appendix-I in consultation with the DFO, State Agriculture University. The plant species with dense/moderate canopy of native origin should be chosen. Species of small/medium/tall trees alternating with shrubs should be planted in a mixed manner.
33. Taller/one year old Saplings raised in appropriate size of bags, preferably ecofriendly bags should be planted as per the advice of local forest authorities/botanist/Horticulturist with regard to site specific choices. The proponent shall earmark the greenbelt area with GPS coordinates all along the boundary of the project site with at least 3 meters wide and in between blocks in an organized manner
34. A Disaster management Plan shall be prepared and included in the EIA/EMP Report for the complete life of the proposed quarry (or) till the end of the lease period.
35. A Risk Assessment and management Plan shall be prepared and included in the EIA/EMP Report for the complete life of the proposed quarry (or) till the end of the lease period.
36. Occupational Health impacts of the Project should be anticipated and the proposed preventive measures spelt out in detail. Details of pre-placement medical examination and periodical medical examination schedules should be incorporated in the EMP. The project


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specific occupational health mitigation measures with required facilities proposed in the mining area may be detailed.

37. Public health implications of the Project and related activities for the population in the impact zone should be systematically evaluated and the proposed remedial measures should be detailed along with budgetary allocations.
38. The Socio-economic studies should be carried out within a 5km buffer zone from the mining activity. Measures of socio-economic significance and influence to the local community proposed to be provided by the Project Proponent should be indicated. As far as possible, quantitative dimensions may be given with time frames for implementation.
39. Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the Project should be given.
40. Benefits of the Project if the Project is implemented should be spelt out. The benefits of the Project shall clearly indicate environmental, social, economic, employment potential, etc.
41. If any quarrying operations were carried out in the proposed quarrying site for which now the EC is sought, the Project Proponent shall furnish the detailed compliance to EC conditions given in the previous EC with the site photographs which shall duly be certified by MoEF&CC, Regional Office, Chennai (or) the concerned DEE/TNPCB.
42. The PP shall prepare the EMP for the entire life of mine and also furnish the sworn affidavit stating to abide the EMP for the entire life of mine.
43. Concealing any factual information or submission of false/fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this Terms of Conditions besides attracting penal provisions in the Environment (Protection) Act, 1986.


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Appendix -I
List of Native Trees Suggested for Planting

No	Scientific Name	Tamil Name	Tamil Name
1	<i>Aegle marmelos</i>	Vilvam	விலவம்
2	<i>Adenanthura pavonina</i>	Manjadi	மஞ்சாடி, ஆனனக்குன்றிமணி
3	<i>Albizia lebbek</i>	Vaagai	வாகை
4	<i>Albizia amara</i>	Usil	உசில்
5	<i>Bauhinia purpurea</i>	Mantharai	மந்தாரை
6	<i>Bauhinia racemosa</i>	Aathi	ஆத்தி
7	<i>Bauhinia tomentosa</i>	Iruvathi	இருவாத்தி
8	<i>Buchanania axillaris</i>	Kattuma	காட்டுமா
9	<i>Borassus flabellifer</i>	Panai	பனை
10	<i>Butea monosperma</i>	Murukkamaram	முருக்கமரம்
11	<i>Bobax ceiba</i>	Ilavu, Sevvilavu	இலவு
12	<i>Calophyllum inophyllum</i>	Punnai	புன்னை
13	<i>Cassia fistula</i>	Sarakondrai	சரக்கொன்றை
14	<i>Cassia roxburghii</i>	Sengondrai	செங்கொன்றை
15	<i>Chloroxylon swietenia</i>	Purasamaram	புரசு மரம்
16	<i>Cochlospermum religiosum</i>	Kongu, Manjallavu	கோங்கு, மஞ்சள் இலவு
17	<i>Cordia dichotoma</i>	Naruvuli	நருவூர்
18	<i>Creteva adansonii</i>	Mavalangum	மாலைலங்கம்
19	<i>Dillenia indica</i>	Uva, Uzha	உசா
20	<i>Dillenia pentagyna</i>	SiruUva, Sitruzha	சீறு உசா
21	<i>Diospyro sebenum</i>	Karungali	கருங்காலி
22	<i>Diospyro schloroxylon</i>	Vaganai	வாகனை
23	<i>Ficus amplissima</i>	Kalltchi	கல் இச்சி
24	<i>Hibiscus tiliaceou</i>	Aatrupoovarasu	ஆற்றுப்புவரசு
25	<i>Hardwickia binata</i>	Aacha	ஆச்சா
26	<i>Holoptelia integrifolia</i>	Aayili	ஆயா மரம், ஆயிலி
27	<i>Lannea coromandelica</i>	Odham	ஓதியம்
28	<i>Lagerstroemia speciosa</i>	Poo Marudhu	பூ மருது
29	<i>Lepisanthus tetraphylla</i>	Neikottaimaram	நெய் கொட்டை மரம்
30	<i>Limonia acidissima</i>	Vila maram	விலா மரம்
31	<i>Litsea glutinos</i>	Pisinpattai	அரம்பா பிசின்பட்டை
32	<i>Madhuca longifolia</i>	Illuppai	இலுப்பை
33	<i>Mamilkara hexandra</i>	UlakkaiPaalai	உலக்கை பாலை
34	<i>Mimusops elengi</i>	Magizhamaram	மகிழ்மரம்
35	<i>Mitragyna parvifolia</i>	Kadambu	கடம்பு
36	<i>Morinda pubescens</i>	Nuna	நுணா
37	<i>Morinda citrifolia</i>	Vellai Nuna	வெள்ளை நுணா
38	<i>Phoenix sylvestre</i>	Eachai	ஈச்சமரம்
39	<i>Pongamia pinnat</i>	Pungam	புங்கம்

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40	<i>Premna mollissima</i>	Murru	முனை
41	<i>Premna serratifolia</i>	Narumunai	நடு முனை
42	<i>Premna tomentosa</i>	Malaipoovarasu	மலை பூவரசு
43	<i>Prosopis cinerea</i>	Vanni maram	வன்னி மரம்
44	<i>Pterocarpus marsupium</i>	Vengai	வேங்கை
45	<i>Pterospermum canescens</i>	Vennangu, Tada	வெண்ணாங்கு
46	<i>Pterospermum xylocarpum</i>	Polavu	பூவ
47	<i>Putranjiva roxburghii</i>	Karipala	கறிபாலா
48	<i>Salvadora persica</i>	Ugaa Maram	உகா மரம்
49	<i>Sapindus emarginatus</i>	Manupungan, Soapukai	மணிப்புகள் சோப்புக்காய்
50	<i>Saraca asoca</i>	Asoca	அசோகா
51	<i>Streblus asper</i>	Piray maram	பிராய் மரம்
52	<i>Strychnos nuxvomica</i>	Yetti	எட்டி
53	<i>Strychnos potatorum</i>	Therthang Kottai	தேத்தான் கொட்டை
54	<i>Syzygium cumini</i>	Naval	நாவல்
55	<i>Terminalia belleric</i>	Thandri	தான்றி
56	<i>Terminalia arjuna</i>	Ven marudhu	வெண் மருது
57	<i>Toona ciliata</i>	Sandhana vembu	சந்தன வேம்பு
58	<i>Thespesia populnea</i>	Puvarasu	பூவரசு
59	<i>Walsuratrifoliata</i>	valsura	வால்சுரா
60	<i>Wrightia tinctoria</i>	Veppalai	வெப்பாலை
61	<i>Pithecellobium dulce</i>	Kodukkapuli	கொடுக்காப்பூள்

Discussion by SEIAA and the Remarks:-

Existing Black Granite over an extent of 20.28.0 Ha S.F.No. 170/1, Siruvalai Village, Villuppuram Taluk, Villuppuram District, Tamil Nadu by M/s. Tamil Nadu Minerals Limited - For Terms of Reference under violation category

The subject was placed in this 645th meeting of Authority held on 09.08.2023. The Authority noted that the subject was placed in the 395th meeting of SEAC held on 27.07.2023 and the SEAC has furnished its recommendation for the grant of **Terms of Reference (ToR) with Public Hearing under violation category** for the EIA study subject to the conditions stated therein.

After detailed discussions, the Authority accepts the recommendation of SEAC and decided to **grant Terms of Reference (ToR) along with Public Hearing under violation category restricting the ultimate working depth to 45m BGL** and cluster for undertaking the combined Environment Impact Assessment Study and preparation of separate Environment Management Plan subject to the conditions as recommended by SEAC & normal conditions in addition to the conditions in 'Annexure B' of this minute.

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1. The Authority noticed that the project proponent has proposed to work in too many blocks. Instead, the PP shall rework the site to work in one component block in phases.
2. The project proponent shall prepare mine closure plan considering quantity of Topsoil & Weathered rock. If any.
3. The DFO letter stating that the proximity distance of Reserve Forests, Protected Areas, Sanctuaries, Tiger reserve etc., up to a radius of 25 km from the proposed site.

Annexure 'B'

Cluster Management Committee

1. Cluster Management Committee shall be framed which must include all the proponents in the cluster as members including the existing as well as proposed quarry.
2. The members must coordinate among themselves for the effective implementation of EMP as committed including Green Belt Development, Water sprinkling, tree plantation, blasting etc.,
3. The List of members of the committee formed shall be submitted to AD/Mines before the execution of mining lease and the same shall be updated every year to the AD/Mines.
4. Detailed Operational Plan must be submitted which must include the blasting frequency with respect to the nearby quarry situated in the cluster, the usage of haul roads by the individual quarry in the form of route map and network.
5. The committee shall deliberate on risk management plan pertaining to the cluster in a holistic manner especially during natural calamities like intense rain and the mitigation measures considering the inundation of the cluster and evacuation plan.
6. The Cluster Management Committee shall form Environmental Policy to practice sustainable mining in a scientific and systematic manner in accordance with the law. The role played by the committee in implementing the environmental policy devised shall be given in detail.
7. The committee shall furnish action plan regarding the restoration strategy with respect to the individual quarry falling under the cluster in a holistic manner.
8. The committee shall furnish the Emergency Management plan within the cluster.
9. The committee shall deliberate on the health of the workers/staff involved in the mining as well as the health of the public.
10. The committee shall furnish an action plan to achieve sustainable development goals with reference to water, sanitation & safety.
11. The committee shall furnish the fire safety and evacuation plan in the case of fire accidents.


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Impact study of mining

12. Detailed study shall be carried out in regard to impact of mining around the proposed mine lease area covering the entire mine lease period as per precise area communication order issued from reputed research institutions on the following
- a) Soil health & soil biological, physical land chemical features.
 - b) Climate change leading to Droughts, Floods etc.
 - c) Pollution leading to release of Greenhouse gases (GHG), rise in Temperature, & Livelihood of the local people.
 - d) Possibilities of water contamination and impact on aquatic ecosystem health.
 - e) Agriculture, Forestry & Traditional practices.
 - f) Hydrothermal/Geothermal effect due to destruction in the Environment.
 - g) Bio-geochemical processes and its foot prints including environmental stress.
 - h) Sediment geochemistry in the surface streams.

Agriculture & Agro-Biodiversity

13. Impact on surrounding agricultural fields around the proposed mining Area.
14. Impact on soil flora & vegetation around the project site.
15. Details of type of vegetations including no. of trees & shrubs within the proposed mining area and. If so, transplantation of such vegetations all along the boundary of the proposed mining area shall committed mentioned in EMP.
16. The Environmental Impact Assessment should study the biodiversity, the natural ecosystem, the soil micro flora, fauna and soil seed banks and suggest measures to maintain the natural Ecosystem.
17. Action should specifically suggest for sustainable management of the area and restoration of ecosystem for flow of goods and services.
18. The project proponent shall study and furnish the impact of project on plantations in adjoining patta lands, Horticulture, Agriculture and livestock.

Forests

19. The project proponent shall detailed study on impact of mining on Reserve forests free ranging wildlife.
20. The Environmental Impact Assessment should study impact on forest, vegetation, endemic, vulnerable and endangered indigenous flora and fauna.


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21. The Environmental Impact Assessment should study impact on standing trees and the existing trees should be numbered and action suggested for protection.
22. The Environmental Impact Assessment should study impact on protected areas, Reserve Forests, National Parks, Corridors and Wildlife pathways, near project site.

Water Environment

23. Hydro-geological study considering the contour map of the water table detailing the number of ground water pumping & open wells, and surface water bodies such as rivers, tanks, canals, ponds etc. within 1 km (radius) so as to assess the impacts on the nearby waterbodies due to mining activity. Based on actual monitored data, it may clearly be shown whether working will intersect groundwater. Necessary data and documentation in this regard may be provided, covering the entire mine lease period.
24. Erosion Control measures.
25. Detailed study shall be carried out in regard to impact of mining around the proposed mine lease area on the nearby Villages, Water-bodies/ Rivers, & any ecological fragile areas.
26. The project proponent shall study impact on fish habitats and the food WEB/ food chain in the water body and Reservoir.
27. The project proponent shall study and furnish the details on potential fragmentation impact on natural environment, by the activities.
28. The project proponent shall study and furnish the impact on aquatic plants and animals in water bodies and possible scars on the landscape, damages to nearby caves, heritage site, and archaeological sites possible land form changes visual and aesthetic impacts.
29. The Terms of Reference should specifically study impact on soil health, soil erosion, the soil physical, chemical components and microbial components.
30. The Environmental Impact Assessment should study on wetlands, water bodies, rivers streams, lakes and farmer sites.

Energy

31. The measures taken to control Noise, Air, Water, Dust Control and steps adopted to efficiently utilise the Energy shall be furnished.

Climate Change

32. The Environmental Impact Assessment shall study in detail the carbon emission and also suggest the measures to mitigate carbon emission including development of carbon sinks and temperature reduction including control of other emission and climate mitigation activities.


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33. The Environmental Impact Assessment should study impact on climate change, temperature rise, pollution and above soil & below soil carbon stock.

Mine Closure Plan

34. Detailed Mine Closure Plan covering the entire mine lease period as per precise area communication order issued.

EMP

35. Detailed Environment Management Plan along with adaptation, mitigation & remedial strategies covering the entire mine lease period as per precise area communication order issued.
36. The Environmental Impact Assessment should hold detailed study on EMP with budget for Green belt development and mine closure plan including disaster management plan.

Risk Assessment

37. To furnish risk assessment and management plan including anticipated vulnerabilities during operational and post operational phases of Mining.

Disaster Management Plan

38. To furnish disaster management plan and disaster mitigation measures in regard to all aspects to avoid/reduce vulnerability to hazards & to cope with disaster/untoward accidents in & around the proposed mine lease area due to the proposed method of mining activity & its related activities covering the entire mine lease period as per precise area communication order issued.

Others

39. The project proponent shall furnish VAO certificate with reference to 300m radius regard to approved habitations, schools, Archaeological sites, Structures, railway lines, roads, water bodies such as streams, odai, vaari, canal, channel, river, lake pond, tank etc.
40. As per the MoEF& CC office memorandum F.No.22-65/2017-IA.III dated: 30.09.2020 and 20.10.2020 the proponent shall address the concerns raised during the public consultation and all the activities proposed shall be part of the Environment Management Plan.
41. The project proponent shall study and furnish the possible pollution due to plastic and microplastic on the environment. The ecological risks and impacts of plastic & microplastics on aquatic environment and fresh water systems due to activities, contemplated during mining may be investigated and reported.


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A. STANDARD TERMS OF REFERENCE

- 1) Year-wise production details since 1994 should be given, clearly stating the highest production achieved in any one year prior to 1994. It may also be categorically informed whether there had been any increase in production after the EIA Notification 1994 came into force, w.r.t. the highest production achieved prior to 1994.
- 2) A copy of the document in support of the fact that the Proponent is the rightful lessee of the mine should be given.
- 3) All documents including approved mine plan, EIA and Public Hearing should be compatible with one another in terms of the mine lease area, production levels, waste generation and its management, mining technology etc. and should be in the name of the lessee.
- 4) All corner coordinates of the mine lease area, superimposed on a High Resolution Imagery/ topo sheet, topographic sheet, geomorphology and geology of the area should be provided. Such an Imagery of the proposed area should clearly show the land use and other ecological features of the study area (core and buffer zone).
- 5) Information should be provided in Survey of India Topo sheet in 1:50,000 scale indicating geological map of the area, geomorphology of land forms of the area, existing minerals and mining history of the area, important water bodies, streams and rivers and soil characteristics.
- 6) Details about the land proposed for mining activities should be given with information as to whether mining conforms to the land use policy of the State; land diversion for mining should have approval from State land use board or the concerned authority.
- 7) It should be clearly stated whether the proponent Company has a well laid down Environment Policy approved by its Board of Directors? If so, it may be spelt out in the EIA Report with description of the prescribed operating process/procedures to bring into focus any infringement/deviation/ violation of the environmental or forest norms/ conditions? The hierarchical system or administrative order of the Company to deal with the environmental issues and for ensuring compliance with the EC conditions may also be given. The system of reporting of non-compliances / violations of environmental norms to the Board of Directors of the Company and/or shareholders or stakeholders at large, may also be detailed in the EIA Report.
- 8) Issues relating to Mine Safety, including subsidence study in case of underground mining and slope study in case of open cast mining, blasting study etc. should be detailed. The proposed safeguard measures in each case should also be provided.


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- 9) The study area will comprise of 10 km zone around the mine lease from lease periphery and the data contained in the EIA such as waste generation etc. should be for the life of the mine / lease period.
- 10) Land use of the study area delineating forest area, agricultural land, grazing land, wildlife sanctuary, national park, migratory routes of fauna, water bodies, human settlements and other ecological features should be indicated. Land use plan of the mine lease area should be prepared to encompass preoperational, operational and post operational phases and submitted. Impact, if any, of change of land use should be given.
- 11) Details of the land for any Over Burden Dumps outside the mine lease, such as extent of land area, distance from mine lease, its land use, R&R issues, if any, should be given.
- 12) Certificate from the Competent Authority in the State Forest Department should be provided, confirming the involvement of forest land, if any, in the project area. In the event of any contrary claim by the Project Proponent regarding the status of forests, the site may be inspected by the State Forest Department along with the Regional Office of the Ministry to ascertain the status of forests, based on which, the Certificate in this regard as mentioned above be issued. In all such cases, it would be desirable for representative of the State Forest Department to assist the Expert Appraisal Committees.
- 13) Status of forestry clearance for the broken up area and virgin forestland involved in the Project including deposition of Net Present Value (NPV) and Compensatory Afforestation (CA) should be indicated. A copy of the forestry clearance should also be furnished.
- 14) Implementation status of recognition of forest rights under the Scheduled Tribes and other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 should be indicated.
- 15) The vegetation in the RF / PF areas in the study area, with necessary details, should be given.
- 16) A study shall be got done to ascertain the impact of the Mining Project on wildlife of the study area and details furnished. Impact of the project on the wildlife in the surrounding and any other protected area and accordingly, detailed mitigative measures required, should be worked out with cost implications and submitted.
- 17) Location of National Parks, Sanctuaries, Biosphere Reserves, Wildlife Corridors, Ramsar site Tiger/ Elephant Reserves/(existing as well as proposed), if any, within 10 km of the mine lease should be clearly indicated, supported by a location map duly authenticated by Chief Wildlife Warden. Necessary clearance, as may be applicable to such projects due to proximity of the ecologically sensitive areas as mentioned above, should be obtained from the Standing


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Committee of National Board of Wildlife and copy furnished.

- 18) A detailed biological study of the study area [core zone and buffer zone (10 km radius of the periphery of the mine lease)] shall be carried out. Details of flora and fauna, endangered, endemic and RET Species duly authenticated, separately for core and buffer zone should be furnished based on such primary field survey, clearly indicating the Schedule of the fauna present. In case of any scheduled-I fauna found in the study area, the necessary plan along with budgetary provisions for their conservation should be prepared in consultation with State Forest and Wildlife Department and details furnished. Necessary allocation of funds for implementing the same should be made as part of the project cost.
- 19) Proximity to Areas declared as 'Critically Polluted' or the Project areas likely to come under the 'Aravali Range', (attracting court restrictions for mining operations), should also be indicated and where so required, clearance certifications from the prescribed Authorities, such as the SPCB or State Mining Department should be secured and furnished to the effect that the proposed mining activities could be considered.
- 20) Similarly, for Coastal Projects, a CRZ map duly authenticated by one of the authorized agencies demarcating LTL, HTL, CRZ area, location of the mine lease with respect to CRZ, coastal features such as mangroves, if any, should be furnished. (Note: The Mining Projects falling under CRZ would also need to obtain approval of the concerned Coastal Zone Management Authority).
- 21) R&R Plan/compensation details for the Project Affected People (PAP) should be furnished. While preparing the R&R Plan, the relevant State/National Rehabilitation & Resettlement Policy should be kept in view. In respect of SCs /STs and other weaker sections of the society in the study area, a need based sample survey, family-wise, should be undertaken to assess their requirements, and action programmes prepared and submitted accordingly, integrating the sectoral programmes of line departments of the State Government. It may be clearly brought out whether the village(s) located in the mine lease area will be shifted or not. The issues relating to shifting of village(s) including their R&R and socio-economic aspects should be discussed in the Report.
- 22) One season (non-monsoon) [i.e. March-May (Summer Season); October-December (post monsoon season) ; December-February (winter season)]primary baseline data on ambient air quality as per CPCB Notification of 2009, water quality, noise level, soil and flora and fauna shall be collected and the AAQ and other data so compiled presented date-wise in the EIA and


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- EMP Report. Site-specific meteorological data should also be collected. The location of the monitoring stations should be such as to represent whole of the study area and justified keeping in view the pre-dominant downwind direction and location of sensitive receptors. There should be at least one monitoring station within 500 m of the mine lease in the pre-dominant downwind direction. The mineralogical composition of PM10, particularly for free silica, should be given.
- 23) Air quality modeling should be carried out for prediction of impact of the project on the air quality of the area. It should also take into account the impact of movement of Vehicles for transportation of mineral. The details of the model used and input parameters used for modeling should be provided. The air quality contours may be shown on a location map clearly indicating the location of the site, location of sensitive receptors, if any, and the habitation. The wind roses showing pre-dominant wind direction may also be indicated on the map.
 - 24) The water requirement for the Project, its availability and source should be furnished. A detailed water balance should also be provided. Fresh water requirement for the Project should be indicated.
 - 25) Necessary clearance from the Competent Authority for drawl of requisite quantity of water for the Project should be provided.
 - 26) Description of water conservation measures proposed to be adopted in the Project should be given. Details of rainwater harvesting proposed in the Project, if any, should be provided.
 - 27) Impact of the Project on the water quality, both surface and groundwater, should be assessed and necessary safeguard measures, if any required, should be provided.
 - 28) Based on actual monitored data, it may clearly be shown whether working will intersect groundwater. Necessary data and documentation in this regard may be provided. In case the working will intersect groundwater table, a detailed Hydro Geological Study should be undertaken and Report furnished. The Report inter-alia, shall include details of the aquifers present and impact of mining activities on these aquifers. Necessary permission from Central Ground Water Authority for working below ground water and for pumping of ground water should also be obtained and copy furnished.
 - 29) Details of any stream, seasonal or otherwise, passing through the lease area and modification / diversion proposed, if any, and the impact of the same on the hydrology should be brought out.
 - 30) Information on site elevation, working depth, groundwater table etc. Should be provided both in AMSL and bgl. A schematic diagram may also be provided for the same.
 - 31) A time bound Progressive Greenbelt Development Plan shall be prepared in a tabular form


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(indicating the linear and quantitative coverage, plant species and time frame) and submitted, keeping in mind, the same will have to be executed up front on commencement of the Project. Phase-wise plan of plantation and compensatory afforestation should be charted clearly indicating the area to be covered under plantation and the species to be planted. The details of plantation already done should be given. The plant species selected for green belt should have greater ecological value and should be of good utility value to the local population with emphasis on local and native species and the species which are tolerant to pollution.

- 32) Impact on local transport infrastructure due to the Project should be indicated. Projected increase in truck traffic as a result of the Project in the present road network (including those outside the Project area) should be worked out, indicating whether it is capable of handling the incremental load. Arrangement for improving the infrastructure, if contemplated (including action to be taken by other agencies such as State Government) should be covered. Project Proponent shall conduct Impact of Transportation study as per Indian Road Congress Guidelines.
- 33) Details of the onsite shelter and facilities to be provided to the mine workers should be included in the EIA Report.
- 34) Conceptual post mining land use and Reclamation and Restoration of mined out areas (with plans and with adequate number of sections) should be given in the EIA report.
- 35) Occupational Health impacts of the Project should be anticipated and the proposed preventive measures spelt out in detail. Details of pre-placement medical examination and periodical medical examination schedules should be incorporated in the EMP. The project specific occupational health mitigation measures with required facilities proposed in the mining area may be detailed.
- 36) Public health implications of the Project and related activities for the population in the impact zone should be systematically evaluated and the proposed remedial measures should be detailed along with budgetary allocations.
- 37) Measures of socio economic significance and influence to the local community proposed to be provided by the Project Proponent should be indicated. As far as possible, quantitative dimensions may be given with time frames for implementation.
- 38) Detailed Environmental Management Plan (EMP) to mitigate the environmental impacts which, should inter-alia include the impacts of change of land use, loss of agricultural and grazing land, if any, occupational health impacts besides other impacts specific to the proposed Project.
- 39) Public Hearing points raised and commitment of the Project Proponent on the same along with


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time bound Action Plan with budgetary provisions to implement the same should be provided and also incorporated in the final EIA/EMP Report of the Project.

- 40) Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the Project should be given.
- 41) The cost of the Project (capital cost and recurring cost) as well as the cost towards implementation of EMP should be clearly spelt out.
- 42) A Disaster management Plan shall be prepared and included in the EIA/EMP Report.
- 43) Benefits of the Project if the Project is implemented should be spelt out. The benefits of the Project shall clearly indicate environmental, social, economic, employment potential, etc.
- 44) Besides the above, the below mentioned general points are also to be followed:-
 - a) Executive Summary of the EIA/EMP Report
 - b) All documents to be properly referenced with index and continuous page numbering.
 - c) Where data are presented in the Report especially in Tables, the period in which the data were collected and the sources should be indicated.
 - d) Project Proponent shall enclose all the analysis/testing reports of water, air, soil, noise etc. using the MoEF&CC/NABL accredited laboratories. All the original analysis/testing reports should be available during appraisal of the Project.
 - e) Where the documents provided are in a language other than English, an English translation should be provided.
 - f) The Questionnaire for environmental appraisal of mining projects as devised earlier by the Ministry shall also be filled and submitted.
 - g) While preparing the EIA report, the instructions for the Proponents and instructions for the Consultants issued by MoEF&CC vide O.M. No. J-11013/41/2006-IA.II (I) dated 4th August, 2009, which are available on the website of this Ministry, should be followed.
 - h) Changes, if any made in the basic scope and project parameters (as submitted in Form-I and the PFR for securing the TOR) should be brought to the attention of MoEF&CC with reasons for such changes and permission should be sought, as the ToR may also have to be altered. Post Public Hearing changes in structure and content of the draft EIA/EMP (other than modifications arising out of the P.H. process) will entail conducting the PH again with the revised documentation.
 - i) As per the circular no. J-11011/618/2010-IA.II (I) dated 30.5.2012, certified report of the status of compliance of the conditions stipulated in the Environment Clearance for the


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existing operations of the project, should be obtained from the Regional Office of Ministry of Environment, Forest and Climate Change, as may be applicable.

- j) The EIA report should also include (i) surface plan of the area indicating contours of main topographic features, drainage and mining area, (ii) geological maps and sections and (iii) sections of the mine pit and external dumps, if any, clearly showing the land features of the adjoining area.

In addition to the above, the following shall be furnished:-

The Executive summary of the EIA/EMP report in about 8-10 pages should be prepared incorporating the information on following points:

1. Project name and location (Village, District, State, Industrial Estate (if applicable).
2. Process description in brief, specifically indicating the gaseous emission, liquid effluent and solid and hazardous wastes.
3. Measures for mitigating the impact on the environment and mode of discharge or disposal.
4. Capital cost of the project, estimated time of completion.
5. The proponent shall furnish the contour map of the water table detailing the number of wells located around the site and impacts on the wells due to mining activity.
6. A detailed study of the lithology of the mining lease area shall be furnished.
7. Details of village map, "A" register and FMB sketch shall be furnished.
8. Detailed mining closure plan for the proposed project approved by the Geology of Mining department shall be submitted along with EIA report.
9. Obtain a letter /certificate from the Assistant Director of Geology and Mining standing that there is no other Minerals/resources like sand in the quarrying area within the approved depth of mining and below depth of mining and the same shall be furnished in the EIA report.
10. EIA report should strictly follow the Environmental Impact Assessment Guidance Manual for Mining of Minerals published February 2010.
11. Detail plan on rehabilitation and reclamation carried out for the stabilization and restoration of the mined areas.
12. The EIA study report shall include the surrounding mining activity, if any.
13. Modeling study for Air, Water and noise shall be carried out in this field and incremental increase in the above study shall be substantiated with mitigation measures.
14. A study on the geological resources available shall be carried out and reported.
15. A specific study on agriculture & livelihood shall be carried out and reported.


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16. Impact of soil erosion, soil physical chemical and biological property changes may be assumed.
17. Site selected for the project - Nature of land - Agricultural (single/double crop), barren, Govt./ private land, status of is acquisition, nearby (in 2-3 km.) water body, population, with in 10km other industries, forest , eco-sensitive zones, accessibility, (note - in case of industrial estate this information may not be necessary)
18. Baseline environmental data - air quality, surface and ground water quality, soil characteristic, flora and fauna, socio-economic condition of the nearby population
19. Identification of hazards in handling, processing and storage of hazardous material and safety system provided to mitigate the risk.
20. Likely impact of the project on air, water, land, flora-fauna and nearby population
21. Emergency preparedness plan in case of natural or in plant emergencies
22. Issues raised during public hearing (if applicable) and response given
23. CER plan with proposed expenditure.
24. Occupational Health Measures
25. Post project monitoring plan
26. The project proponent shall carry out detailed hydro geological study through intuitions/NABET Accredited agencies.
27. A detailed report on the green belt development already undertaken is to be furnished and also submit the proposal for green belt activities.
28. The proponent shall propose the suitable control measure to control the fugitive emissions during the operations of the mines.
29. A specific study should include impact on flora & fauna, disturbance to migratory pattern of animals.
30. Reserve funds should be earmarked for proper closure plan.
31. A detailed plan on plastic waste management shall be furnished. Further, the proponent should strictly comply with, Tamil Nadu Government Order (Ms) No.84 Environment and forests (EC.2) Department dated 25.06.2018 regarding ban on one time use and throw away plastics irrespective of thickness with effect from 01.01.2019 under Environment (Protection) Act, 1986. In this connection, the project proponent has to furnish the action plan.

Besides the above, the below mentioned general points should also be followed:-

- a. A note confirming compliance of the TOR, with cross referencing of the relevant sections / pages of the EIA report should be provided.


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- b. All documents may be properly referenced with index, page numbers and continuous page numbering.
- c. Where data are presented in the report especially in tables, the period in which the data were collected and the sources should be indicated.
- d. While preparing the EIA report, the instructions for the proponents and instructions for the consultants issued by MoEF & CC vide O.M. No. J-11013/41/2006-IA.II (I) dated 4th August, 2009, which are available on the website of this Ministry should also be followed.
- e. The consultants involved in the preparation of EIA/EMP report after accreditation with Quality Council of India (QCI)/National Accreditation Board of Education and Training (NABET) would need to include a certificate in this regard in the EIA/EMP reports prepared by them and data provided by other organization/Laboratories including their status of approvals etc. In this regard circular no F. No.J -11013/77/2004-IA-II(I) dated 2nd December, 2009, 18th March 2010, 28th May 2010, 28th June 2010, 31st December 2010 & 30th September 2011 posted on the Ministry's website <http://www.moef.nic.in/> may be referred.
 - After preparing the EIA (as per the generic structure prescribed in Appendix-III of the EIA Notification, 2006) covering the above mentioned points, the proponent will take further necessary action for obtaining environmental clearance in accordance with the procedure prescribed under the EIA Notification, 2006.
 - The final EIA report shall be submitted to the SEIAA, Tamil Nadu for obtaining Environmental Clearance.
 - The TORs with public hearing prescribed shall be **valid for a period of three years** from the date of issue, for submission of the EIA/EMP report as per OMNo.J-11013/41/2006-IA-II(I)(part) dated 29th August, 2017.


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Copy to:

1. The Additional Chief Secretary to Government, Environment, Climate Change and Forests Department, Govt. of Tamil Nadu, Fort St. George, Chennai - 9.
2. The Chairman, Central Pollution Control Board, Parivesh Bhavan, CBD Cum-Office Complex, East Arjun Nagar, New Delhi - 110 032.
3. The Chairman, Tamil Nadu Pollution Control Board,

76, Mount Salai, Guindy, Chennai - 600 032.

4. The APCCF (C), Regional Office, MoEF & CC (SZ), 34, HEPC Building, 1st & 2nd Floor, Cathedral Garden Road, Nungambakkam, Chennai - 34.
5. Monitoring Cell, IA Division, Ministry of Environment, Forests & CC, Paryavaran Bhavan, CGO Complex, New Delhi - 110 003.
6. The District Collector, Tiruvallur District.
7. Stock File.



Industries, Investment Promotion
& Commerce (MME.1) Department
Secretariat, Chennai-600 009.

Letter No.3492325/MME.1/2022-1, dated 13.01.2023

From
Thiru. S. Krishnan, I.A.S.,
Additional Chief Secretary to Government.

To
Tvl Tamil Nadu Minerals Limited,
31, Kamarajar Salai,
TWAD House,
Chepauk, Chennai – 600 005.

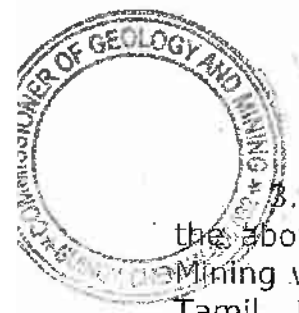
Sir,

Sub: Industries, Investment Promotion & Commerce - Mines
and Minerals – Minor Mineral – Black Granite –
Villupuram District – Vikravandi Taluk – Siruvalai
Village - Over an extent of 20.28.0 hectares out of
31.44.0 hectares of Government poramboke land in
S.F.No.170/1 (part) – Quarry Lease Application
preferred by Tvl. TAMIN – Precise Area Communicated
– Approved mining Plan and Environmental Clearance
– Called for.

Ref: 1. Your Quarry Lease Application dated: 14.02.2022.
2. From the District Collector, Villupuram, File
Rc. No.B/G&M/80/2022, dated 07.07.2022.
3. From the Commissioner of Geology and Mining,
File Rc. No.5480/MM4/2022, dated: 05.11.2022.

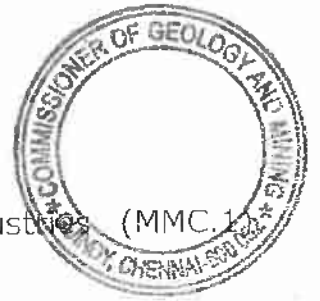
I am directed to refer your quarry lease application first cited and to state that in the references second and third cited, the District Collector, Villupuram and the Commissioner of Geology and Mining respectively have recommended the quarry lease application for grant of quarry lease for quarrying Black Granite over an extent of 20.28.0 hectares out of 31.44.0 hectares of Government poramboke land in S.F.No.170/1 (Part) in Siruvalai Village, Vikravandi Taluk, Villupuram District for a period of 20 years under Rule 8-C of the Tamil Nadu Minor Mineral Concession Rules, 1959.

2. The Government carefully examined the recommendations of the District Collector, Villupuram and the Commissioner of Geology and Mining, to communicate precise area for the extent of 20.28.0 hectares out of 31.44.0 hectares of Government poramboke land in S.F.No.170/1 (Part) in Siruvalai Village, Vikravandi Taluk, Villupuram District and accordingly, the Government hereby communicate Precise Area for the above said area under sub-rule (3) (b) of Rule 8-C of the Tamil Nadu Minor Mineral Concession Rules, 1959 for grant of quarry lease.



3. I, therefore, request you to furnish the Approved Mining Plan for the above-mentioned Precise Area through the Commissioner of Geology and Mining within a period of 3 months as per sub-rule (3) (b) of Rule 8-C of the Tamil Nadu Minor Mineral Concession Rules, 1959 and to produce Environmental Clearance obtained from the competent authority for the above said area for grant of quarry lease subject to the following conditions:-

- a) A safety distance of 10 m and 7.5 m should be provided for the poramboke and patta lands respectively situated adjacent to the applied area.
- b) The four boundaries of the applied area should be fixed and the quarrying activity should be restricted within the area granted on lease.
- c) A safety distance of 50 m should be maintained to water bodies if any situated in and around the applied area.
- d) While carrying out quarry operation and transportation no hindrance shall be caused to the adjoining Patta lands, Odai, Government lands and Agriculture activities.
- e) A safety distance of 50 m should be maintained to the EB line if any situated in and around the applied area.
- f) A safety distance of 10 m should be maintained to village road if any situated in and around the applied area.
- g) Barbed wire fencing or compound wall should be erected all along the boundary of the lease granted area.
- h) The waste materials generated during the course of quarrying should be dumped only within the lease hold area.
- i) Environment Clearance should be obtained from the competent authority in respect of the subject area as per rule 42 of Tamil Nadu Minor Mineral Concession Rules, 1959 and as per the notification of the Ministry of Environment and Forest and any other clearances if any.
- j) The applicant company should submit Mining Due Clearance Certificate for the period from 2018-19 to 2022-23 after March, 2023 as per the exemption granted vide G.O.(D).No.43, Industries (MME.1) Department, dated 16.05.2022.
- k) The applicant company should fence the lease granted area with barbed wire before the execution of lease deed as follows:
 - The pillar post shall be firmly grounded with concrete foundation of height not less than 2 meters with a distance between two pillars shall not be more than 3 meters.
 - The applicant company shall incorporate the DGPS readings for the entire boundary Pillars of the area and the same should be clearly shown in the mining plan.
 - A soft copy of the digitized map with DGPS readings should be submitted in the CD form to the Deputy Director (G&M), Villupuram.



- l) The conditions mentioned in G.O.(Ms).No. 79, Industries (MMC.1) Department, dated 06.04.2015 should be complied with.
- m) As per rule 12 (V) of Mineral (other than Atomic and Hydro Carbons Energy Minerals) Concession Rules, 2016, the applicant company shall at his own expenses erect, maintain and keep in repair all the boundary pillars.
- n) The applicant company should ensure that all the labourers are registered in the Labour Welfare Board and Insurance Scheme.
- o) The applicant company should comply with the additional conditions stipulated in the Government of India, Ministry of Mines order No.11/02/2020, dated 14.01.2020 issued as per the order of Hon'ble Supreme Court of India, dated 08.01.2020 which states that "The mining lease holders shall after ceasing mining operations, under take re-grassing the mining area and any other area which may have been disturbed due to this mining activities and restore the land to a condition which is fit for growth of fodder, flora and fauna etc.,"
- p) The applicant company should complete the DGPS survey of the area to be granted on lease before the execution of lease.
- q) Tvl. TAMIN Limited, Chennai-5 shall produce current mining dues clearance certificate as per the affidavit filed along with this application, on grant of mining lease for this area but, before execution of lease deed.
- r) The applicant company should submit latest Board of Directors details before execution of lease deed.
- s) The District Collector, Villupuram shall obtain a sworn-in-affidavit from the applicant company containing the above conditions before execution of lease deed and also ensure that the instructions issued in Government Letter No.12789/MMB.2/2002-7, Industries Department, Dated 9.1.2003 are complied with.

4. I, also, request you to make the payment of mining dues payable by TAMIN and to submit the mining due clearance certificate in accordance with the orders issued in G.O.(D).No.43, Industries (MME.1) Department, dated 16.05.2022.

Yours faithfully,

for Additional Chief Secretary to Government

Copy to:

The Commissioner of Geology and Mining,
Guindy, Chennai - 600 032.

The District Collector, Villupuram.



COMMISSIONERATE OF GEOLOGY AND MINING

From
Thiru. J.Jayakanthan, I.A.S.,
Commissioner,
Department of Geology and Mining,
Guindy, Chennai - 600 032.

To
The Managing Director,
Tvl.TAMIN Ltd.,
No.31, Kamarajar Salai,
TWAD House, Chennai - 5.

Rc. No.5480/MM4/2022, dated: 19.05.2023

Sir,

Sub: Mines and Minerals - Minor Mineral - Black Granite
- Villupuram district - Vikravandi taluk - Siruvalai
village - Government Poramboke land -S.F.No.170/1
(P)- over an extent of 20.28.0 ha - Quarry lease
application preferred by Tvl.TAMIN Ltd.,- Precise
area communicated by the Government - Mining
Plan submitted by Tvl.TAMIN Ltd - Recommended &
Forwarded by the Deputy Director (G&M),
Villupuram - Approval accorded.

- Ref :
1. Quarry lease application of Tvl.TAMIN Ltd., dated 14.02.2022
 2. The District Collector, Villupuram file Rc.No.B/G&M/80/2022, dated 07.07.2022.
 3. The Commissioner of Geology and Mining file in Rc.No.5480/MM4/2022, dated:05.11.2022.
 4. Government letter No.3492325/MME.1/2022-1, dated:13.01.2023.
 5. Mining Plan submitted by the Tvl.TAMIN Ltd., in district office dated 17.04.2023
 6. The Deputy Director,(G&M), Villupuram letter Rc.No.B/G&M/80/2022, dated 20.04.2023.

Kind attention is invited to the references cited.

2. Tvl.TAMIN Ltd., vide reference 5th cited has submitted the draft mining plan on 17.04.2023 for quarrying Black granite over an extent of 20.28.0 ha of Government Poramboke land in S.F.No. 170/1 (P) of Siruvalai village, Vikravandi taluk and Villupuram district.

3. The Deputy Director (G&M), Villupuram vide reference 6th cited has recommended & forwarded the mining plan submitted by Tvl.TAMIN Ltd., and reported as follows,

- i. Tvl.TAMIN Ltd., vide reference 1st cited has preferred an application for the grant of quarry lease for quarrying Black granite over an extent of 20.28.0 ha of Government Poramboke land in S.F.No. 170/1 (P) of Siruvalai Village, Vikravandi taluk, Villupuram district for a period of 20 years under the Rule 19-A of Tamil Nadu Minor Mineral Concession Rules 1959.
- ii. In the reference 2nd & 3rd cited, the District Collector, Villupuram and the Commissioner of Geology and Mining respectively have recommended the quarry lease application to the Government to communicate the precise area.
- iii. Based on the recommendations of the District Collector, Villupuram and the Commissioner of Geology and Mining, the Government have communicated the precise area to the applicant company with a direction to submit the approved mining plan as per sub-rule (3) (b) of Rule 8-C of Tamil Nadu Minor Mineral Concession Rules, 1959 and to produce environmental clearance from the competent authority for the said area vide reference 4th cited.
- iv. As per the precise area communication, the applicant company Tvl.TAMIN Ltd., has submitted the draft Mining plan for the proposed Black Granite quarry lease over an extent of 20.28.0 ha of Government Poramboke land in S.F.No. 170/1 (P) of Siruvalai Village, Vikravandi taluk, Villupuram district vide reference 5th cited.
- v. The Assistant Geologist, O/o. Deputy Director of Geology and Mining, Villupuram has furnished inspection report wherein it has been stated that the land over an extent of 31.44.0 hectares In S.F.No.170/1, Siruvalai village, Vikravandi Taluk is classified as un assessed waste (Kalankuthu) as per the village records. Previously a quarry lease was granted to Tvl. TAMIN Ltd., for quarrying black granite over an extent of 31.44.0 ha of Government land in S.F.No.170/1 of Siruvalai village, Vikravandi taluk (Erstwhile Viluppuram Taluk) for a period of 20 years from 25.07.1996 to 24.07.2016 vide G.O.Ms.No.285 Ind (MME1) Dept. dt. 28.12.1995. Due to the previous quarrying there are six pits available in the applied area. The area is consisting of outcrops of boulders and

thin cover of gravel having a thickness of about 2 meter is observed in the applied area. Black Granite (Dolerite) available in the applied area is dark in colour and suitable for making monuments. Black Granite deposit is equigranular, fine to medium grained exhibiting ophitic texture and is medium to dark coloured. The sets of joints include mainly strike joints along NW-SE direction. As per the Mining Plan, the total mineable reserves of black granite for the entire lease period is estimated as 3,65,797 cbm. The total Mineable and recoverable reserves of black granite for the entire lease period are estimated as 33,155 cbm and 3,316 cbm @ 10% recovery rate respectively. The proposed production for the first five years' period is 3,300 cbm at 10% recovery rate.

- vi. The Mining Plan submitted by Tvl. Tamil Nadu Minerals Limited, Chennai for the grant of quarry lease for black granite over an extent of 20.28.0 hectares of Government land in S.F.No.170/1 (Part) of Siruvalai Village of Vikravandi Taluk of Villupuram District for a period of 20 (twenty) years are found to be correct, tallied with the ground realities, incorporated the following conditions mentioned in the precise area communication letter.

- A safety distance of 7.5 m should be provided to the adjacent patta lands and a safety distance of 10 m should be provided to the adjacent Government lands.
- A safety distance of 50 m should be maintained to water bodies.
- A safety distance of 50 m should be maintained to the EB line in any situated in and around the applied area.
- A safety distance of 10 m should be maintained to Village road.

- vii. The proposed year wise production are as follows.

Year	ROM (cbm)	Production (m ³) @ 10% Recovery	Granite Waste @ 90% cbm
1 st year	4000	400	3600
2 nd year	20000	2000	18000
3 rd year	3000	300	2700
4 th year	3000	300	2700
5 th year	3000	300	2700
Total	33000	3300	29700

Finally, based on the inspection report of the Assistant Geologist, O/o Deputy Director, Dept. of Geology and Mining, Villupuram the Deputy Director, Villupuram has recommended and forwarded the mining plan submitted by Tvl. Tamil Nadu Minerals Limited, Chennai for quarrying Black Granite over an extent of 20.28.0 ha in SF.No.170/1 (part) of Siruvalai village, Vikravandi taluk and Viluppuram district to the Commissioner of Geology and Mining, Chennai for approval.

4) The mining plan submitted by Tvl.TAMIN Ltd, and report of the Deputy Director, (G&M), Villupuram have been examined with reference to the provisions of Rule 12, 13 and 15 of Granite Conservation and Development Rules, 1999 read with G.O.(Ms). No. 87, Industries (MMC.1), Department dated: 22.02.2001. Based on the recommendation of the Deputy Director, (G&M), Villupuram the mining plan submitted by Tvl.TAMIN Ltd, is here by approved subject to the following conditions in addition to the conditions stipulated in the precise area communication issued by the Government.

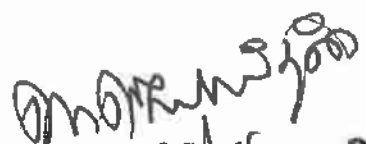
- i. No quarrying operation should be carried out beyond 9 m from the ground surface. (above ground level 9m + 9m below ground level)
- ii. This mining plan is approved without prejudice to any other Law applicable to the quarry lease from time to time whether such Laws are made by the Central Government, State Government or any other authority
- iii. The approval of the mining plan does not in any way imply the approval of the Government in terms of any other provisions of the Mines and Minerals (Development and Regulation) Act 1957, or any other connected laws including Forest (Conservation) Act, 1980, Forest Conservation Rules, 1981, Environment Protection Act, 1980, Indian Explosives Act, 1884 (Central Act IV of 1884) and the rules made there under and the Tamil Nadu Minor Mineral Concession Rules, 1959.
- iv. This mining plan including progressive mine closure plan is approved without prejudice to any other order or direction from any court of competent jurisdiction.

- v. Provisions of the Mines Act, 1952 and the Rules and Regulations made there under including submission of notice of opening, appointment of manager and other statutory officials as required under Mines Act, 1952 shall be complied with.
- vi. Provisions made under Mines and Minerals (Development & Regulation) Act, 1957, MMDR Amendment Act, 2015 and Granite conservation and Development Rules, 1999 made there under shall be complied with.
- vii. Relaxation to be obtained under Rule 106(2)(b) of Metalliferous Mines Regulations, 1961 from the Director of Mines Safety, if necessary.
- viii. If anything is found to be concealed as required by the Granite Conservation and Development Rules, 1999 and Tamil Nadu Minor Mineral Concession Rules, 1959 and proposal for rectification has not been made, the approval shall be deemed to have been withdrawn with immediate effect.
- ix. No blasting and transportation of materials in vehicles should be carried out from 6.00 PM to 6.00AM.
- x. A green belt should be constructed to prevent sound and air pollution due to the proposed quarrying activity over an extent of 20.28.0 ha of Government Poramboke land in S.F.No. 170/1 (P) of Siruvalai village, Vikravandi taluk and Villupuram district.by planting at least 250 seedlings all along the boundary the area.
- xi. No hindrance shall be caused to the adjacent Patta lands and Government poramboke lands if any while quarrying and transportation of granite.
- xii. The applicant company shall strictly adhere to the statutory and safety requirements and the applicant company should ensure the periodical medical checkup to the quarry workers to safeguard them from quarry related diseases.
- xiii. The waste materials generated during the course of quarrying should be dumped only within the lease hold area that will be earmarked for the purpose in the mining plan as per rule 31 of GCDR, 1999.
- xiv. The applicant company shall submit Scheme of Mining, mine closure plan and other statutory requirements within the time stipulated for submission of the above as per rules.

- xv. The applicant company should fence the lease granted area with barbed wire before the execution of lease deed as follows.
- The pillar post shall be firmly grounded with concrete foundation of height not less than 2 m with a distance between two pillars shall not be more than 3mts.
 - The applicant company shall incorporate the DGPS readings for the entire boundary pillars of the area and the same should be clearly shown in the mining plan.
 - A soft copy of the digitized map with DGPS readings should be submitted in CD to the Deputy Director (G&M), Villupuram.
- xvi. The boundary stone has to be fixed for the subject quarry should be fixed and the district administration / Geology and Mining Department should ensure that the quarrying operation should be restricted only within the area granted for lease.
- xvii. Environment Clearance should be obtained from the competent authority in respect of the subject area as per rule 42 of Tamil Nadu Minor Mineral Concession Rules, 1959 and as per the notification of the Ministry of Environment and Forest and any other clearances if any.
- xviii. As per rule 12 (v) of Mineral (other than Atomic and Hydro Carbons Energy Minerals) Concession Rules, 2016, the applicant company shall at his own expense, erect, maintain and keep in repair all boundary pillars.
- xix. The conditions mentioned in G.O No. 79 Industries Department dated 06.04.2015 should be complied with.
- xx. The applicant company may use mild explosives during quarrying, and storing of explosives if required, by obtaining valid license under explosive Acts and Rules.
- xxi. If required, the applicant company should obtain exemption from Director General of Mines Safety if any under rule 106 (2)(b) of Metallurgical Mines Regulations, 1961.
- xxii. If any violation is found during quarrying operation, the penal provisions of Tamil Nadu Minor Mineral Concession Rules 1959 and other rules and act in force will attract.
- xxiii. Child labour should not be engaged in the quarry works and the quarry workers should be enrolled in the insurance scheme through the Labour Department.

- xxiv. The lessee should remit the Stamp Duty as per the approved modified mining plan during the currency of the lease period.
- xxv. The earlier instances of irregular / illegal quarrying, if any, shall not be regularized through the approval of this document.
- xxvi. The lessee shall remit the penalty / cost of mineral / other dues if any as arrived by the District Collector / Deputy Director (G&M), Villupuram district.
- xxvii. Non adherence to any condition set-out above, the approval shall be deemed to have been withdrawn with immediate effect.
- xxviii. The applicant should comply with the additional conditions stipulated in the Government of India, Ministry of Mines, Order No.11/02/2020, dated.14.01.2020 issued as per the Order of the Hon'ble Supreme Court of India, dated.08.01.2020 states that, "The Mining lease holders shall after ceasing mining operations, undertake re-grassing the mining area and any other area which may have been disturbed due to their mining activities and restore the land to a condition which is fit for growth of fodder, flora, fauna etc".
- xxix. The applicant company should carry out DGPS survey and erection of RCC boundary pillars as per the norms stipulated in the EOI notification in Rc.No.2921/MM4/2019 dated.01.02.2018 and subsequent corrigendum dated 13.08.2019.

Encl: 2 copies of Approved mining plan.

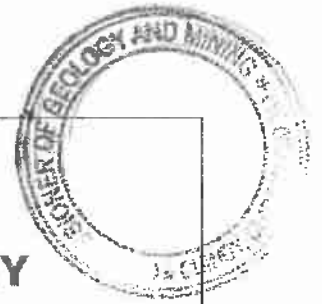

Commissioner of Geology and Mining
19/5/2020

Copy Submitted to:

The Additional Chief Secretary to Government,
Industries, Investment Promotion
and Commerce Department,
Secretariat, Chennai-600009.

Copy to:

The District Collector,
Villupuram District.



MINING PLAN FOR SIRUVALAI BLACK GRANITE QUARRY

District : Villupuram
Taluk : Vikravandi
Village : Siruvalai
SF. No. : 170/1(Part)
Extent : 20.28.0Ha.

(UNDER RULE 12 & 13 OF GCDR, 1999)

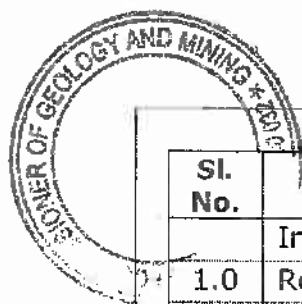
APPLICANT:



M/s. TAMIL NADU MINERALS LIMITED,
 (An Undertaking of Government of Tamil Nadu)
No.31, KAMARAJAR SALAI,
CHEPAUK, CHENNAI – 600 005.

Name of the RQP : Dr. E.GANESAN, Ph.D, PGDELP.
Designation : DEPUTY MANAGER, TAMIN
Mobile No : 94888 55535





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5.	Copy of Combined Sketch	E
6.	Copy of RQP Certificate	F
7.	List of Board of Directors	G



DECLARATION BY NOMINATED OWNER

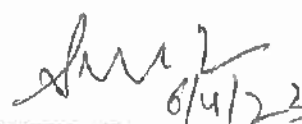
Certified that the Mining Plan in respect of Siruvalai Village SF.No.170/1(Part) over an extent of 20.28.0Ha Black Granite Quarry of Siruvalai Village, Vikravandi Taluk, Villupuram District, Tamil Nadu State has been prepared in full consultation with me and I understood its contents and agree to implement the same in accordance with the law. The Mining plan has been prepared by Dr.E.Ganesan, a Recognized Qualified Person.

I hereby undertake that all the modifications as made in the Mining Plan by the RQP are deemed to have been made with my knowledge and consent and shall be acceptable to me and binding on me in all respects.

I request you to make further correspondences regarding the modifications of the Mining Plan with the said Recognized Qualified Person in the following address:

Dr. E. Ganesan, Ph.D, PGDELP
Deputy Manager (Mining Lease),
Recognized Qualified Person
Tamil Nadu Minerals Limited,
No.31, Kamarajar Salai,
Chepauk, Chennai-600 005.

Dr. E. Ganesan, Ph.D, PGDELP
Deputy Manager (Mining Lease),
Recognized Qualified Person
Tamil Nadu Minerals Limited,
No.31, Kamarajar Salai,
Chepauk, Chennai-600 005.


8/4/23
SUDEEP JAIN, I A S,
MANAGING DIRECTOR
5/6





CERTIFICATE FROM THE RECOGNIZED QUALIFIED PERSON

This is to certify that the provisions of Granite Conservation and Development Rules, 1999 and Tamil Nadu Minor Mineral Concession Rules, 1959(Amendment) have been observed in the preparation of Mining Plan for of Siruvalai Village SF.No.170/1 (Part) over an extent of 20.28.0Ha Black Granite Quarry of Siruvalai Village, Vikravandi Taluk, Villupuram District, Tamil Nadu State has been prepared for

M/s. Tamil Nadu Minerals Limited,

No.31, Kamarajar Salai,
Chepauk, Chennai- 600 005.

Wherever specific permissions/exemptions/relaxations and approvals are required, the applicant will approach concerned authorities of Commissioner of Geology and Mining, Government of Tamil Nadu, Guindy, Chennai for such permissions/exemptions/relaxations and approvals.

It is also certified that information furnished in the above Mining Plan are true and correct to the best of my knowledge.

Place: Chennai

Date:

Dr. E.GANESAN, Ph.D., PGDELP
Qualified Person,
Tamil Nadu Minerals Limited
Chennai - 600 005.

**TAMIN,
MINING PLAN FOR
SIRUVALAI BLACK GRANITE (DOLERITE)**

[Under Rule 8-C and 42 of Tamil Nadu Minor Mineral Concession Rules, 1959
Rule 12 and 13 of Granite Conservation and Development Rules, 1999]



INTRODUCTION:

Tamil Nadu Minerals Limited was established in the year 1978 to carryout systematic mining and development of different minerals all over the State.

The present Mining Plan has been prepared for quarrying Black Granite (Dolerite) over an total extent of 20.28.0Ha in SF.No.170/1(Part) of Siruvalai Village, Vikravandi Taluk, Villupuram District for 20 years for which precise area communication has been granted vide Government Industries, Investment Promotion & Commerce (MME.1)Department, Letter No.3492325/MME.1/2022-1, dated:13.01.2023.

PART-I

1.0. MINING PLAN:

Name of Mine:

Siruvalai SF.No.170/1(Part) Black Granite Quarry.

1.2 Particulars of Approval of Mining Plan under GCDR (indicate approval No. and date):

As the subject area is fresh lease, the question of approval of mining does not arise at this stage.

1.3 Date of commencement of Mining Operations:

Will be intimated after execution of the lease deed under rule 8-C(5)(c) of the Tamil Nadu Minor Mineral Concession Rules, 1959.

1.4 (a) Deficiencies, if any that existed in the approved Mining Plan to be taken note of and rectified by incorporating suitable proposal for implementation in the Scheme of Mining:

Not applicable at this stage as it is a fresh lease.

1.4(b) Review of Compliance of salient features of Mining Plan on chapter-wise basis bringing out marked deviations, if any and justifications/ reasons thereof. Items to be covered may include exploration, mine development, exploitation, afforestation programme, reclamation and rehabilitation, control of dust, noise and ground vibration and any other significant feature:

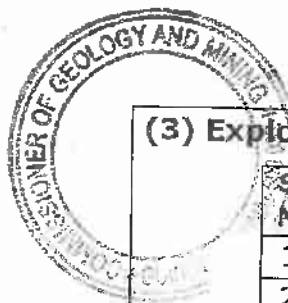
(1) Exploration:

The same mineral available in the mineralised area of nearby Private mining leases Hence, no more exploration study is required.

(2) Mine Development:

Sl. No	Year Pertaining to	Proposed generation of waste in the Mining Plan(M ³)		
		Over Burden	Side Burden	Granite Rejects
1.	First	--	306	3600
2.	Second	--	4572	18000
3.	Third	--	--	2700
4.	Fourth	--	--	2700
5.	Fifth	--	--	2700
Total		--	4,878	29,700





(3) Exploitation: (Production)

Sl. No	Year pertaining to	ROM Proposed in the Mining Plan (M ³)	Saleable proposed @ 10% (M ³)
1.	First	4000	400
2.	Second	20000	2000
3.	Third	3000	300
4.	Fourth	3000	300
5.	Fifth	3000	300
	Total	33,000	3,300

(4) Progressive quarry closure Plan:

As a Petrogenetic character, the depth persistence of the Black granite body in the mine area is beyond the workable limits. However, it is very difficult to operate granite dimensional stone mine economically below an average depth of 24m by observing the statutory provisions of Mine Safety Rules and Regulations. Hence in the proposed Mining Plan, only 24m average depth has been envisaged as 'Workable depth' for safe and economic mining.

However, it is proposed not to back fill the ultimate pit, in as much as good quantity of reserves is available below the workable depth of 24m and there is possibility of technology of up gradation in granite mining for greater depths in course of time for safe mining at economic cost beyond 24m depth. The pit boundaries shall be safely fenced and used for agricultural purpose when the pit is filled with underground see page or rain waters.

(5) Control of Dust, Noise and Ground Vibrations:

The quarrying operation is being carried out by semi-mechanized method with deployment of HEMM for development and production activities. Dust will be suppressed by adopting wet drilling method and water sprinkling in the haul road. As expansion rock breaking powder is using for splitting rock the noise level will be reduced. As TAMIN is using Milli Second Delay Detonator (MSDD) for blasting, the vibration observed in this quarry is negligible.

Ground Water:

Ground water table of this area is 15.1m from ground level whereas, TAMIN has proposed to operate the mine up to the depth of 24m from top of the elevated layer. Hence, there is a possibility to intersect the ground water table while crossing the mining operation at a depth of 15 meter at time TAMIN will get necessary permission from the authority concerned.

Significant Features:

TAMIN closely monitored the environmental factors systematically without degrading the land, water and air.



1.4(c) Review of the compliance position of conditions and stipulations imposed, if any, while approving the Mining Plan. In case of non-compliance / partial compliance, detailed justification reasons thereof may be furnished along with proposal for compliance in the ensuing period:

TAMIN always carries out its mining operations in conformity with the above Acts and Rules.

1.4(d) Review of compliance of violations pointed out after inspections made under GCDR, 1999 during last 5 years. The position emerging out of the yearly review of the Mining Plan while checking up implementation of the Mining Plan in the field shall also be taken note of at this stage:

At this stage not applicable

1.4(e) Any other points requiring attention in the interest of proper mine design, development and conservation and environment and ecology of the area:

The proposed mine working is so designed in such a way mainly keeping in view of conservation of mineral, afforestation, environment, and ecology of the mine area.

PART - II

2.0. PROPOSAL UNDER MINING PLAN FOR THE 5 YEARS.

2.1 Name and Address of the Lessee:

Name : M/s.Tamilnadu Minerals Limited,
Address : No. 31, Kamarajar Salai,
Chepauk, Chennai - 600 005.
Tamil Nadu State.
Phone : 044-2989 2018
e.Mail : tamin@taminggranites.com

2.2 Name and address, registration number of the recognized persons together with validity date / person employed under Rule 13 of GCDR1999 who has prepared the Mining Plan:

RQP Certificate Enclosed.

2.3 Mineral (s) to be mined:

To mine the Dolerite Dyke commercially known as 'Black Forest'.

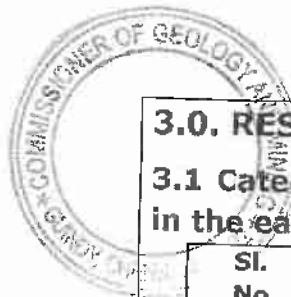
2.4 Area and date of expiry of lease:

Details of Lease Area	Date of expiry of lease
Siruvalai Black Granite Quarry over an extent of 20.28.0Ha in SF.No.170/1(Part) of Siruvalai Village, Vikravandi Taluk, Villupuram District, Tamil Nadu State.	Will be informed after execution of lease deed

2.5 Date of expiry of 5 year period for which Mining Plan approved on the last occasion:

Not applicable at this stage





3.0. RESERVES:

3.1 Category-wise (Proved, Probable and Possible) Reserves Estimated in the earlier Mining Plan with grades:

Sl. No	Updated Geological Reserves as on 01.02.2023	Updated Mineable Reserves as on 01.02.2023	Mineable Saleble Reserves @10% Recovery
1.	3,65,797M ³	33,155 M ³	3,316 M ³

The above estimations arrived at on the basis of geological cross sections.

3.2 Depletion of Reserves:

Nil. At this Mining Plan State

3.3 Additional reserves established category wise (with basis and parameters considered):

No additional reserves.

3.4 Category wise updated reserve with grade (indicate and use grade with analysis) as well as marginal grades:

Sl. No	Updated Geological Reserves as on 01.02.2023	Updated Mineable Reserves as on 01.02.2023	Mineable Saleble Reserves @10% Recovery
1.	3,65,797M ³	33,155 M ³	3,316 M ³

The above estimations arrived at on the basis of geological cross sections updated as on 01.02.2023.

4.0. CONCEPTUAL MINING PLAN:

a) Anticipated Life of the Quarry:

Updated Mineable Reserves	:	33,155 M ³
Anticipated Life of the Quarry	:	5 years.

b. Depicted on Mine Geological Plans and sections with necessary statement annexed supported by essential text, covering the basic & long term design features of mine covering exploration, mine development, optimum exploitation & utilization of the mineral, waste & sub-grade mineral management, and environmental aspects. The ensuing five year detailed programme should but be a part of the conceptual overall Mining Plan.

i) Mine Year wise Production:

Year	ROM(M ³)	Recovery @10%(M ³)	Granite Waste @90% (M ³)
First	4,000	400	3,600
Second	20,000	2,000	18,000
Third	3,000	300	2,700
Fourth	3,000	300	2,700
Fifth	3,000	300	2,700
Total	33,000	3,300	29,700



ii) Optimum exploitation and utilization of the Mineral:

The optimum quantity of mineable reserves as ROM is 33,15,555.

iii) Waste and sub-grade Mineral Management:

The dumps will be maintained not exceeding 5m height and the angle of slope of dumps will be at 45° from horizontal. The waste dump has been earmarked in the Plate No.4.

iv) Environmental Aspects:-

Afforestation Programme:

TAMIN will get Environmental Clearance (EC) from the SEIAA as directed by the Govt after approval of this mining plan and necessary native species of sapling will be planted as per the EC letter.

The quarrying operation is being carried out by semi-mechanized method with deployment of HEMM for development and production activities.

Ultimate Pit dimensions of the Quarry at top and bottom are tabulated below:

Sl. No.	Section line	Ultimate Pit Dimensions at Top (m)		Ultimate Pit Dimensions at Bottom (m)		
		Length	Width	Length	Width	Depth
1.	PQ & AB	29	56.50	14	20.50	24
2.	RS & CD, EF and GH	96	13.20	42.70	8.60	24

5.0 MINING:

5.1 Salient Description of the present mining methods:

The Quarrying work being carried out under the direct supervision of our Statutory Mining Personal of TAMIN as approved by the DGMS under MMR,1961.

5.2 Yearly pit-wise development plan proposed for the next five years, depicted on plans and sections (ore and overburden to be shown clearly along with geological formations encountered depicting also the design and layout of the mine benches in case of opencast mining).

It has been discussed in chapter 4.0 b i)

5.3 Yearly pit-wise development plan proposed for next five years along with grade. Blending proposal, if any, may be indicated:

Nil

Details of depth and benches proposed during the Mining Plan Period:

Year	Section	R.L Proposed (m)	Depth Details(m)				No. of Benches
			Present	Proposed	Remaining	Total	
First	PQ & AB	66.500 to 60.500	0	6	18	24	1
Second	PQ & CD	66.500 to 60.500	0	6	6	12	1
	PQ & AB	60.500 to 42.500	6	18	0	24	3
Third	RS & EF	59.613 to 54.013	2.80	5.60	12	20.40	1
	RS & EF	54.013 to 48.013	8.40	6	6	20.40	1
Fourth	RS & NO	46.937 to 41.937	15	6	0	21	1
	RS & JK	41.479 to 35.479	18	6	0	24	1
Fifth	RS & GH	48.013 to 42.013	14.60	6	0	20.60	1
	RS & JK	47.479 to 41.479	12.00	6	6	24.00	1
	RS & LM	42.013 to 36.013	20.00	6	0	26.00	1

5.4 Any change in proposed method of mining and deployment of machinery, together with reasons thereof:

The quarrying operation is being carried out by semi-mechanized method with deployment of HEMM for development and production activities under Regulation 106

6.0. HANDLING OF WASTE /SUB- GRADE MATERIAL:

6.1 Rate of yearly generation of waste and proposals for disposal of waste for next five years. (indicate sequence of dumping with necessary plan and sections)

The waste generated during the mining operation i.e., side burden, granite rejects and the non-recoverable / un-sized boulders and rubbles etc, will be dumped in the suitable area already selected. The area for disposal of waste rock has been identified in centre portion of the lease area. The unsold blocks are kept within the boundary on the country rock area.

6.1.1 Build-up of dumps from year to year to be shown in yearly plans and sections with description of the method & manner of disposal of waste rock, designed capacity & height of individual dumps and precautions envisaged for confinement of the dumps together with design details of the protective works:

The dumps will be maintained not exceeding 5m height and the angle of slope of dumps will be at 45° from horizontal. The waste dump has been earmarked in the Plate Nos. 4.

6.2 Rate of yearly generation of sub-grade mineral with reference to threshold values and proposals for stacking for next five years. (Submit necessary plan/sections.) (In case variations from the recommended threshold values of IBM, please give adequate justification and reasons).

There is no sub-grade mineral produced. Commercial and small blocks are also proposed to be sold while handling granite waste.

6.3 Quantity and grade of sub-grade material available at the mine as on date duly supported by plans & sections and descriptive statement inclusive of the precautions adopted for storage.

-Not Applicable-

7.0. USE OF MINERAL:

7.1 Changes proposed in the use of mineral, if any, with reasons:

TAMIN will sell dimensional blocks and waste as per Government approvals in place.

7.2 Changes in the specification, if any, imposed by the user industries and or specifications required in the case of new user industries, if any, to be given:

As mentioned above there is no change in specification imposed by the user industries.

7.3 Efforts made for utilization of the sub-grade mineral including fines:

Commercial blocks and small blocks will also be sold in addition to defect free blocks.



8.0. MINERAL BENEFICIATION:

8.1 Results of any beneficiation investigations conducted and changes made in existing mineral beneficiation plant and tailing disposals, if any, with benefits expected (necessary) flow - sheet and tailing dam designs, etc., to be submitted as applicable:

- Not Applicable -

8.2 Beneficiation test done, if any, on sub-grade mineral including fines and proposals for installation of new or additional beneficiation facility, if any (furnish process details in brief along with expected tailings loss):

- Not Applicable -

9.0. ENVIRONMENTAL MANAGEMENT PLAN:

The following observations are made for Environmental Management Plan:

i) Existing land use pattern:

The lease area generally manifests undulating topography with low lying plain agricultural lands. The altitude of the area is 64m (Maximum) above MSL and the area receives normal rainfall of about 985mm.

ii) Land Reclamation & Rehabilitation:-

The mine-pit will be utilized as a water reservoir for agriculture purpose.

iii) Waste Dump management:-

The waste can be dumped on North west and North East Corner of the lease boundary.

10.0. ANY OTHER INFORMATION:

- NIL -

Date:

Dr. E. GANESAN, Ph.D., PGDELP
Qualified Person,
Tamil Nadu Minerals Limited
Chennai - 600 005.

COMMISSIONER
GEOLOGY AND MINING,
GUINDY, CHENNAI-600 032.

This Mining Plan is Approved
Subject to the Conditions/Stipulations
Indicated in the Mining Plan Approval
Letter No./ 5480/ MM4/2022 Dated 19.05.23

DR. E. GANESAN, F.R.D., F.R.C.P.
Qualified Person,
Tamil Nadu Minerals Limited
Chennai - 600 005.

Annexure 5

45

Annexure 5

COMMISSIONER OF GOVT. OF INDIA, CHENNAI

LEASE APPLIED BOUNDARY=20.28.0Hs. (S. No. 170/1 Part)

SAFETY DISTANCE

7.5M FROM BOUNDARY

10M FROM PRIVATE QUARRY

50M FROM ODAI

50M FROM POWER LINE

ELECTRIC LINE

BLACK GRANITE DEPOSIT

EXISTING PIT

PATTA LAND

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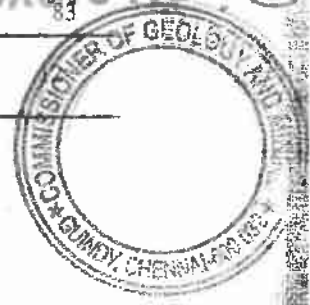
49</

பிரபல நிர்வாக அலுவலர்
45, பழுவாலை 66, அருள்மணி
விநாயகன் ஸ்டர்.

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Page 47 of 67

கி. எண். 45, சிறுவாலை.



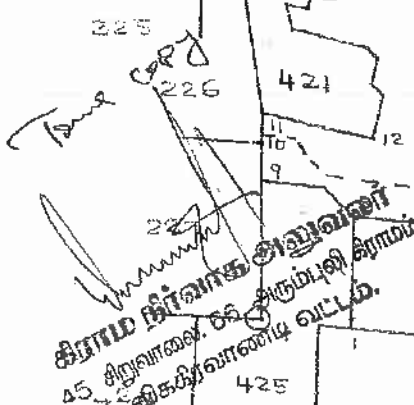
1	2	3	4	5	6	7	8	9	10	11
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2	168-2	ர	பு	...	8-4	7	2 77	0 37.0	1 03	551 ஆ. வீராசாமி கவுண்டர்.
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3B	-3பா	ர	பு	...	8-4	7	2 77	0 55.0	1 52	195 பா. கோவிந்த பதையாட்சி
								1 97.0	5 45	
69 1	169-பா	ர	பு	...	8-4	7	2 77	0 48.5	1 35	627 ச. ராம லிங்கம்.
2	-பா	ர	பு	...	8-4	7	2 77	0 64.5	1 77	49 பெ. ஆறு முகம்.
								1 13.0	3 12	
1	170-1	அ	தி.ஏ.த	31 44.0 துல்லாங்குத்து. ✓
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3	-3	ர	பு	...	8-4	7	2 77	0 10.5	0 29	741 மைனர்கள் த. கலியம் மசன் (1), த. இத்திரா காந்தி (2), காப்பாளர் தரயார் கோமளம்மாள்.
4	-4	ர	பு	...	8-4	7	2 77	1 01.0	2 80	512 மைனர் பா. முருகவேல் காப்பாளர் தாய் ஜெயலட்சுமி அம்மாள்.
5	-5	ர	பு	...	8-4	7	2 77	0 31.0	0 85	287 கோ. சுப்பர மணிய கவுண்டர்.
6	-6	ர	பு	...	8-4	7	2 77	0 57.0	1 58	104 கோ. கண்ணையான்.
7	-7	ர	பு	...	8-4	7	2 77	0 74.5	2 06	336 செ. தினகரன்.
8	-8	ர	பு	...	8-4	7	2 77	0 96.5	2 67	744 வீ. நடேசன்(1), கோ. பிச்சைக்காரன் (5).
9	-9	ர	பு	...	8-4	7	2 77	0 24.0	0 66	102 பு. கண்ணப்பன்.
10	-10	ர	பு	...	8-4	7	2 77	0 13.0	0 36	102 பு. கண்ணப்பன்.
11	-11	ர	பு	...	8-4	7	2 77	0 19.0	0 53	745 த. சுப்பரமணி (1), கோ. பிச்சைக்காரன் (2).

கிராம நிர்வாக அலுவலர்
சிறுவாலை, 66, அரும்புளி கிராமம்
விகிதாசனம்

[Handwritten signature]

SHEET NO. 1

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Annexure No: F

Tamil Nadu Minerals Limited
(A Government of Tamil Nadu Undertaking)



Tel : 044-29852078 / 28511972
Fax : 91-44-298524960
E-mail : tamin@tamingranites.com
GSTIN : 33AABCT2250P1ZA



Regd. Office : No. 31, Kamarajar Salai, "TWAD House" Chepauk, Post Box No. 2961, Chennai - 600 005.

Rc.No.9456/ML1/2017

Dated:03.11.2022

TO WHOM SO EVER IT MAY CONCERN

This is to certify that Shri.E.Ganesan is working as Deputy Manager (Mining Lease) in Tamil Nadu Minerals Limited, Chennai. His qualification and experience in given below.

1. Name : E.Ganesan
2. Qualification : I.M.Sc.(Geology)
ii.M.B.A
iii.Second Class Manager
Certificate of Competency (Restricted)
Certificate No.SMR/5390, date: 06.05.2014

3. Experience :

S/No	Name of the project	Designation	Nature of work	Period	Total period
1.	Sivaganga Graphite Mine	Project Officer (Trainee)	Mining Geologist & over all mining supervision	23.06.1993 to 23.06.1994	Years : 01 Month: 00 Days : 00
2.	- Do -	Project Officer	- Do -	24.06.1994 to 09.07.1997	Years : 03 Month: 00 Days : 15
3.	Lakmana Naicken Patti Quartz & Feldspar Mine	Project Officer	Mining Geologist & over all mining supervision in statutory capacity	03.05.2002 to 23.08.2002	Years : 00 Month: 03 Days : 20
4.	Periyanaalur Limestone Mine	Divisional Manager I/c	- Do -	17.10.2012 to 14.07.2013	Years : 00 Month: 08 Days : 27
Total Period of experience					Years : 05 Month: 01 Days : 02

The Regional Controller of Mines, Indian Bureau of Mines, Chennai Region has already issued the Recognized Qualification Certificate to him vide RQP/MAS/036/88/B dated 21.10.2014.

This certificate is issued only for preparation and Modification of Mining Plan etc., under Rule, 15 of the Minerals (other than Atomic and Hydro Carbons Energy Minerals) Concession Rules, 2016 and under Rule 13 of the Granite Conservation and Development Rules, 1999.

for Tamil Nadu Minerals Ltd,

Subeer Jain
Nominated Owner/Managing Director

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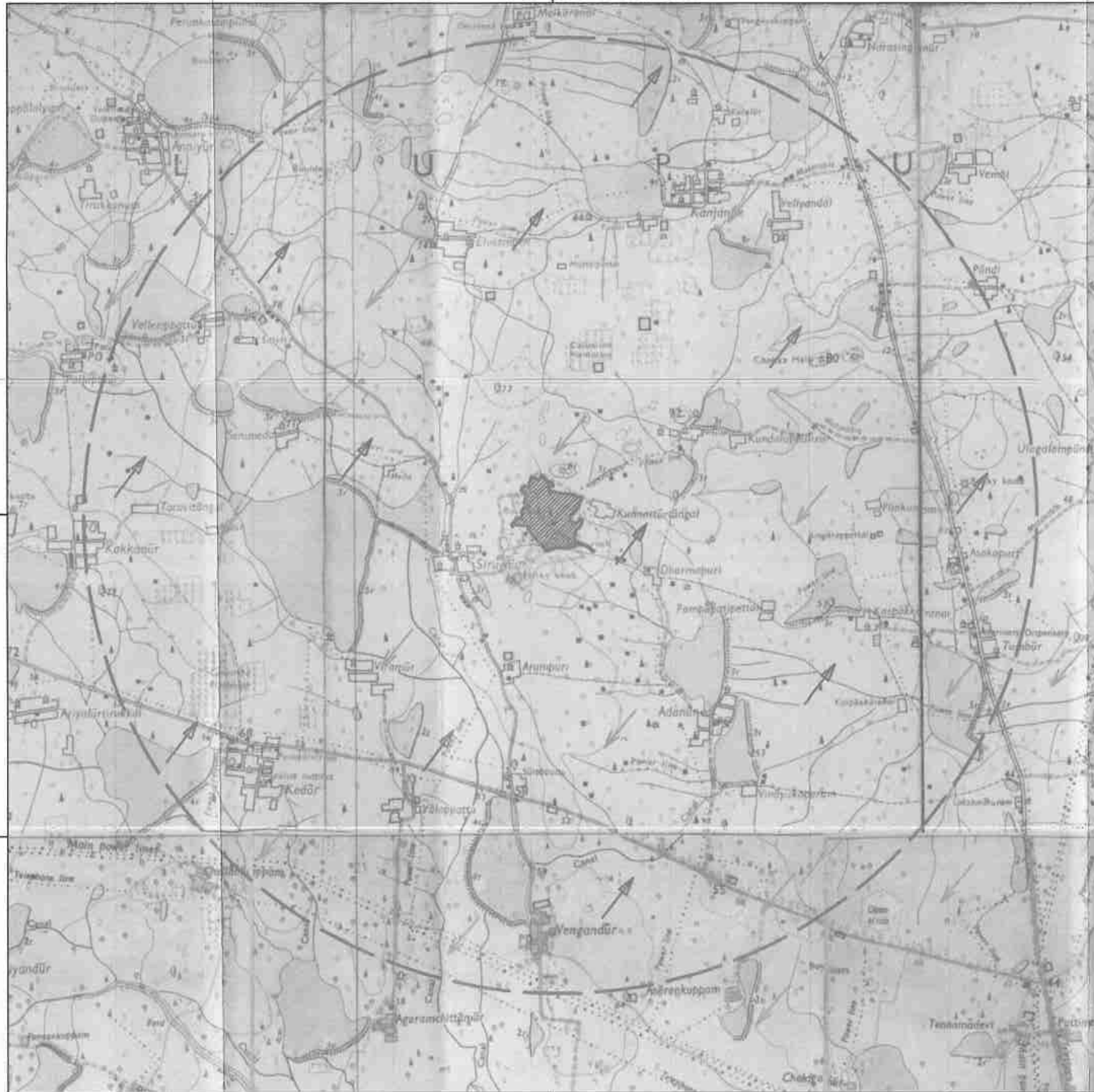


LIST OF BOARD OF DIRECTORS AS ON 10-04-2023

SL.NO	Name of the Director	Designation	Date of Appointment
1	SUDEEP JAIN	Managing Director	11/01/2022
2	SARANYAN KRISHNAN	Nominee Director	06/11/2021
3	NAGARAJAN GOVINDAN	Nominee Director	17/09/2018
4	RENGASAMY PITCHAI MUTHU	Director	02/05/2019
5	PONNUSAMY SANKARA KUMAR	Director	02/05/2019
6	SIGY THOMAS VAIDHYAN	Nominee Director	05/07/2021
7	JAGADEESHWARAN JAYAKANTHAN	Nominee Director	28/06/2022
8	GANESAN KALAIARASI ARUN SUNDAR THAYALAN	Nominee Director	28/06/2021
9	POOJA KULKARNI	Nominee Director	16/02/2023

K. Priyatharisini
K. PRIYATHARISINI
Company Secretary
Membership No: A29095

79° 25' 00" 79° 26' 07.7563"



79° 25' 00" 79° 26' 07.7563"



INDEX

- MINING LEASE APPLIED BOUNDARY
- SAFETY ZONE 5Km. RADIUS
- ROAD
- UNMETALLED ROAD
- RESERVOIR
- STREAM
- CONTOUR
- WIND DIRECTION
 - WINTER
 - SUMMER

DISTRICT : VILLUPURAM
TALUK : VIKRAVANDI
VILLAGE NAME : SIRUVALAI
VILLAGE No. : 45
FIELD No. : 170/1 Part
LEASE APPLIED AREA: 20.28.0Hects. (170/1 Part)

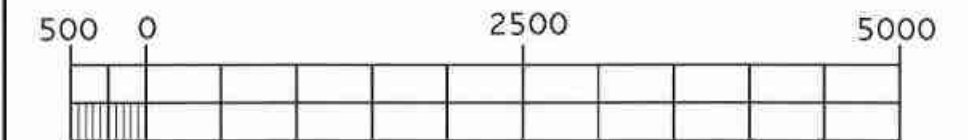
PLATE No. 1

SIRUVALAI BLACK GRANITE QUARRY

KEY PLAN

PART OF TOPO SHEET No. - 57P/8 & 57M/5

EASTERN LONGITUDE FROM 79° 25' 53.4838" TO 79° 26' 21.9508"
NORTHERN LATITUDE FROM 12° 01' 37.0823" TO 12° 02' 02.7900"



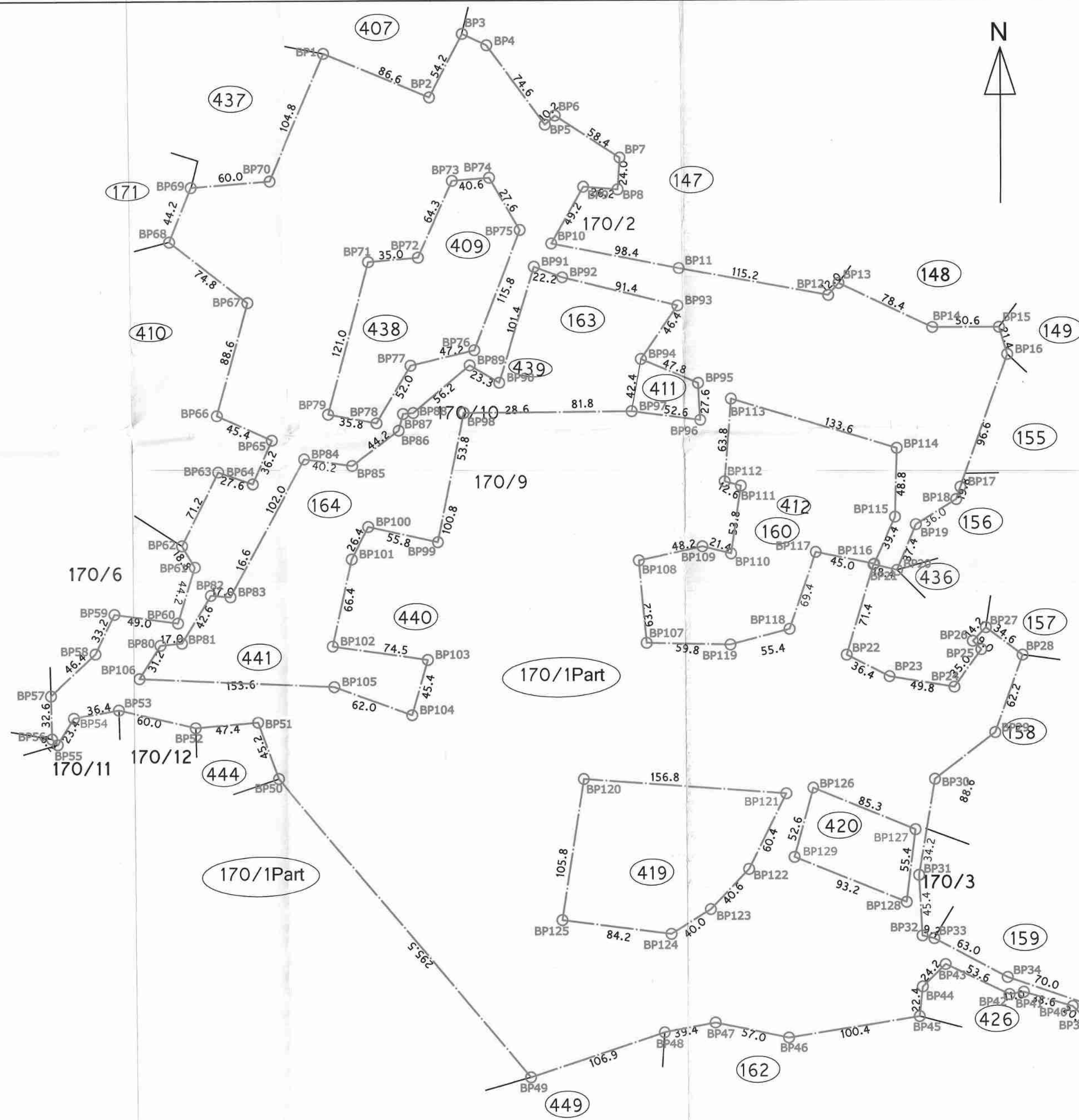
SCALE= 1:50,000 (1CM = 500 M)
ALL DIMENSIONS ARE IN METRES

APPLICANT : M/S.TAMILNADU MINERALS LIMITED,
No.31, KAMARAJAR SALAI,
CHEPAUK, CHENNAI - 600 005.

Certified that the PLAN is Correct.

M. RAM SANKAR
Mines Surveyor
Certificate No: SVR/789.
Tamil Nadu Minerals Limited.

Dr. E.GANESAN, Ph.D., PGD&P
Qualified Person,
Tamil Nadu Minerals Limited
Chennai - 600 005.



Sl.No	Boundary Pillar No.	Latitude	Longitude	Sl.No	Boundary Pillar No.	Latitude	Longitude	Sl.No	Boundary Pillar No.	Latitude	Longitude
1	BP1	12° 02' 02.2915" N	79° 26' 00.3132" E	51	BP51	12° 01' 45.7772" N	79° 25' 58.6991" E	101	BP101	12° 01' 49.8138" N	79° 26' 01.0597" E
2	BP2	12° 02' 01.2205" N	79° 26' 02.9691" E	52	BP52	12° 01' 45.6354" N	79° 25' 57.1348" E	102	BP102	12° 01' 47.6631" N	79° 26' 00.5878" E
3	BP3	12° 02' 02.7900" N	79° 26' 03.7962" E	53	BP53	12° 01' 46.0677" N	79° 25' 55.1948" E	103	BP103	12° 01' 47.3400" N	79° 26' 02.9599" E
4	BP4	12° 02' 02.5112" N	79° 26' 04.4101" E	54	BP54	12° 01' 45.8622" N	79° 25' 54.0672" E	104	BP104	12° 01' 45.9725" N	79° 26' 02.5726" E
5	BP5	12° 02' 00.5536" N	79° 26' 05.8790" E	55	BP55	12° 01' 45.2069" N	79° 25' 53.6647" E	105	BP105	12° 01' 46.6622" N	79° 26' 00.6299" E
6	BP6	12° 02' 00.7778" N	79° 26' 06.1288" E	56	BP56	12° 01' 45.3469" N	79° 25' 53.5163" E	106	BP106	12° 01' 46.8419" N	79° 25' 55.7214" E
7	BP7	12° 01' 59.7466" N	79° 26' 07.7563" E	57	BP57	12° 01' 46.4099" N	79° 25' 53.4838" E	107	BP107	12° 01' 47.7756" N	79° 26' 08.4576" E
8	BP8	12° 01' 58.9649" N	79° 26' 07.7110" E	58	BP58	12° 01' 47.4496" N	79° 25' 54.6014" E	108	BP108	12° 01' 49.8092" N	79° 26' 08.2604" E
9	BP9	12° 01' 59.0286" N	79° 26' 06.8450" E	59	BP59	12° 01' 48.4275" N	79° 25' 55.0745" E	109	BP109	12° 01' 50.1577" N	79° 26' 09.8655" E
10	BP10	12° 01' 57.6281" N	79° 26' 06.0483" E	60	BP60	12° 01' 48.2178" N	79° 25' 56.6844" E	110	BP110	12° 01' 49.9860" N	79° 26' 10.5871" E
11	BP11	12° 01' 57.0287" N	79° 26' 09.2522" E	61	BP61	12° 01' 49.5998" N	79° 25' 57.1022" E	111	BP111	12° 01' 51.6592" N	79° 26' 10.8317" E
12	BP12	12° 01' 56.3755" N	79° 26' 13.0121" E	62	BP62	12° 01' 50.1248" N	79° 25' 56.7802" E	112	BP112	12° 01' 51.7631" N	79° 26' 10.4225" E
13	BP13	12° 01' 56.6716" N	79° 26' 13.2722" E	63	BP63	12° 01' 51.9513" N	79° 25' 57.6849" E	113	BP113	12° 01' 53.8115" N	79° 26' 10.5777" E
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17	BP17	12° 01' 51.6466" N	79° 26' 16.3425" E	67	BP67	12° 01' 56.1412" N	79° 25' 58.4106" E	117	BP117	12° 01' 50.0260" N	79° 26' 12.7098" E
18	BP18	12° 01' 51.3414" N	79° 26' 16.2352" E	68	BP68	12° 01' 57.6359" N	79° 25' 56.4511" E	118	BP118	12° 01' 48.1260" N	79° 26' 12.0536" E
19	BP19	12° 01' 50.7175" N	79° 26' 15.2244" E	69	BP69	12° 01' 58.9782" N	79° 25' 56.9863" E	119	BP119	12° 01' 47.7376" N	79° 26' 10.5733" E
20	BP20	12° 01' 49.5878" N	79° 26' 14.7560" E	70	BP70	12° 01' 59.1394" N	79° 25' 58.9680" E	120	BP120	12° 01' 44.4075" N	79° 26' 06.8865" E
21	BP21	12° 01' 49.7257" N	79° 26' 14.1625" E	71	BP71	12° 01' 57.1607" N	79° 26' 01.4561" E	121	BP121	12° 01' 44.0660" N	79° 26' 11.9789" E
22	BP22	12° 01' 47.4926" N	79° 26' 13.4927" E	72	BP72	12° 01' 57.2705" N	79° 26' 02.6960" E	122	BP122	12° 01' 42.1960" N	79° 26' 11.0534" E
23	BP23	12° 01' 46.9623" N	79° 26' 14.5685" E	73	BP73	12° 01' 59.1639" N	79° 26' 03.5473" E	123	BP123	12° 01' 41.2032" N	79° 26' 10.0888" E
24	BP24	12° 01' 46.7083" N	79° 26' 16.1986" E	74	BP74	12° 01' 59.2426" N	79° 26' 04.4782" E	124	BP124	12° 01' 40.5904" N	79° 26' 09.0941" E
25	BP25	12° 01' 47.6363" N	79° 26' 16.8744" E	75	BP75	12° 01' 57.9598" N	79° 26' 05.2570" E	125	BP125	12° 01' 40.9223" N	79° 26' 06.3522" E
26	BP26	12° 01' 47.8425" N	79° 26' 16.6621" E	76	BP76	12° 01' 54.9881" N	79° 26' 04.1126" E	126	BP126	12° 01' 44.2067" N	79° 26' 12.6545" E
27	BP27	12° 01' 48.1762" N	79° 26' 16.9885" E	77	BP77	12° 01' 54.6042" N	79° 26' 02.5118" E	127	BP127	12° 01' 43.1866" N	79° 26' 15.2288" E
28	BP28	12° 01' 47.5041" N	79° 26' 17.9098" E	78	BP78	12° 01' 53.1784" N	79° 26' 01.6668" E	128	BP128	12° 01' 41.3947" N	79° 26' 15.0125" E
29	BP29	12° 01' 45.5884" N	79° 26' 17.2303" E	79	BP79	12° 01' 53.3907" N	79° 26' 00.4629" E	129	BP129	12° 01' 42.4975" N	79° 26' 12.1871" E
30	BP30	12° 01' 44.4325" N	79° 26' 15.7148" E	80	BP80	12° 01' 47.6693" N	79° 25' 56.2456" E				
31	BP31	12° 01' 42.0609" N	79° 26' 15.3226" E	81	BP81	12° 01' 47.7234" N	79° 25' 56.7835" E				
32	BP32	12° 01' 40.5648" N	79° 26' 15.4094" E	82	BP82	12° 01' 48.9055" N	79° 25' 57.5078" E				
33	BP33	12° 01' 40.4988" N	79° 26' 15.7068" E	83	BP83	12° 01' 48.8726" N	79° 25' 58.0021" E				
34	BP34	12° 01' 39.5428" N	79° 26' 17.5551" E	84	BP84	12° 01' 52.2824" N	79° 25' 59.8508" E				
35	BP35	12° 01' 38.8206" N	79° 26' 19.7559" E	85	BP85	12° 01' 52.1218" N	79° 26' 01.0641" E				
36	BP36	12° 01' 37.0823" N	79° 26' 21.9508" E	86	BP86	12° 01' 52.9971" N	79° 26' 02.2192" E				
37	BP37	12° 01' 36.8679" N	79° 26' 21.6752" E	87	BP87	12° 01' 53.4116" N	79° 26' 02.3304" E				
38	BP38	12° 01' 38.3550" N	79° 26' 19.9940" E	88	BP88	12° 01' 53.4370" N	79° 26' 02.5856" E				
39	BP39	12° 01' 38.3794" N	79° 26' 19.6834" E	89	BP89	12° 01' 54.6168" N	79° 26' 03.9981" E				
40	BP40	12° 01' 38.8366" N	79° 26' 19.1921" E	90	BP90	12° 01' 54.1869" N	79° 26' 04.7403" E				
41	BP41	12° 01' 39.1825" N	79° 26' 17.9621" E	91	BP91	12° 01' 57.0550" N	79° 26' 05.6104" E				
42	BP42	12° 01' 39.1246" N	79° 26' 17.6023" E	92	BP92	12° 01' 56.7951" N	79° 26' 06.3188" E				
43	BP43	12° 01' 39.8618" N	79° 26' 15.9915" E	93	BP93	12° 01' 56.1059" N	79° 26' 09.2169" E				
44	BP44	12° 01' 39.3072" N	79° 26' 15.4207" E	94	BP94	12° 01' 54.7832" N	79° 26' 08.2970" E				
45	BP45	12° 01' 38.5798" N	79° 26' 15.3499" E	95	BP95	12° 01' 54.1953" N	79° 26' 09.7483" E				
46	BP46	12° 01' 38.0429" N	79° 26' 12.0675" E	96	BP96	12° 01' 53.2838" N	79° 26' 09.8075" E				
47	BP47	12° 01' 38.4128" N	79° 26' 10.2161" E	97	BP97	12° 01' 53.4941" N	79° 26' 08.0759" E				
48	BP48	12° 01' 38.1669" N	79° 26' 08.9345" E	98	BP98	12° 01' 53.4442" N	79° 26' 03.8551" E				
49	BP49	12° 01' 37.0492" N	79° 26' 05.5783" E	99	BP99	12° 01' 50.2450" N	79° 26' 03.2111" E				
50	BP50	12° 01' 44.3881" N	79° 25' 59.2261" E	100	BP100	12° 01' 50.6149" N	79° 26' 01.4715" E				

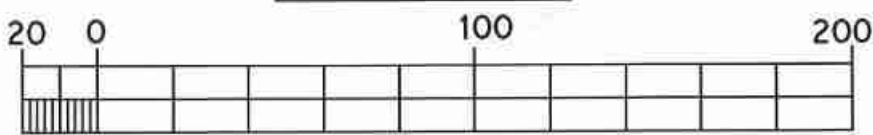
LEGEND

Sl.No.	DESCRIPTION	SYMBOL
1.	LEASE APPLIED BOUNDARY	---
2.	BOUNDARY PILLAR	○ BP1 TO BP129
3.	SURVEY FIELD NO.	170/1Part



DISTRICT : VILLUPURAM
 TALUK : VIKRAVANDI
 VILLAGE NAME : SIRUVALAI
 VILLAGE No. : 45
 FIELD No. : 170/1 Part
 LEASE APPLIED AREA: 20.28.0Hects.(170/1 Part)

SIRUVALAI BLACK GRANITE QUARRY

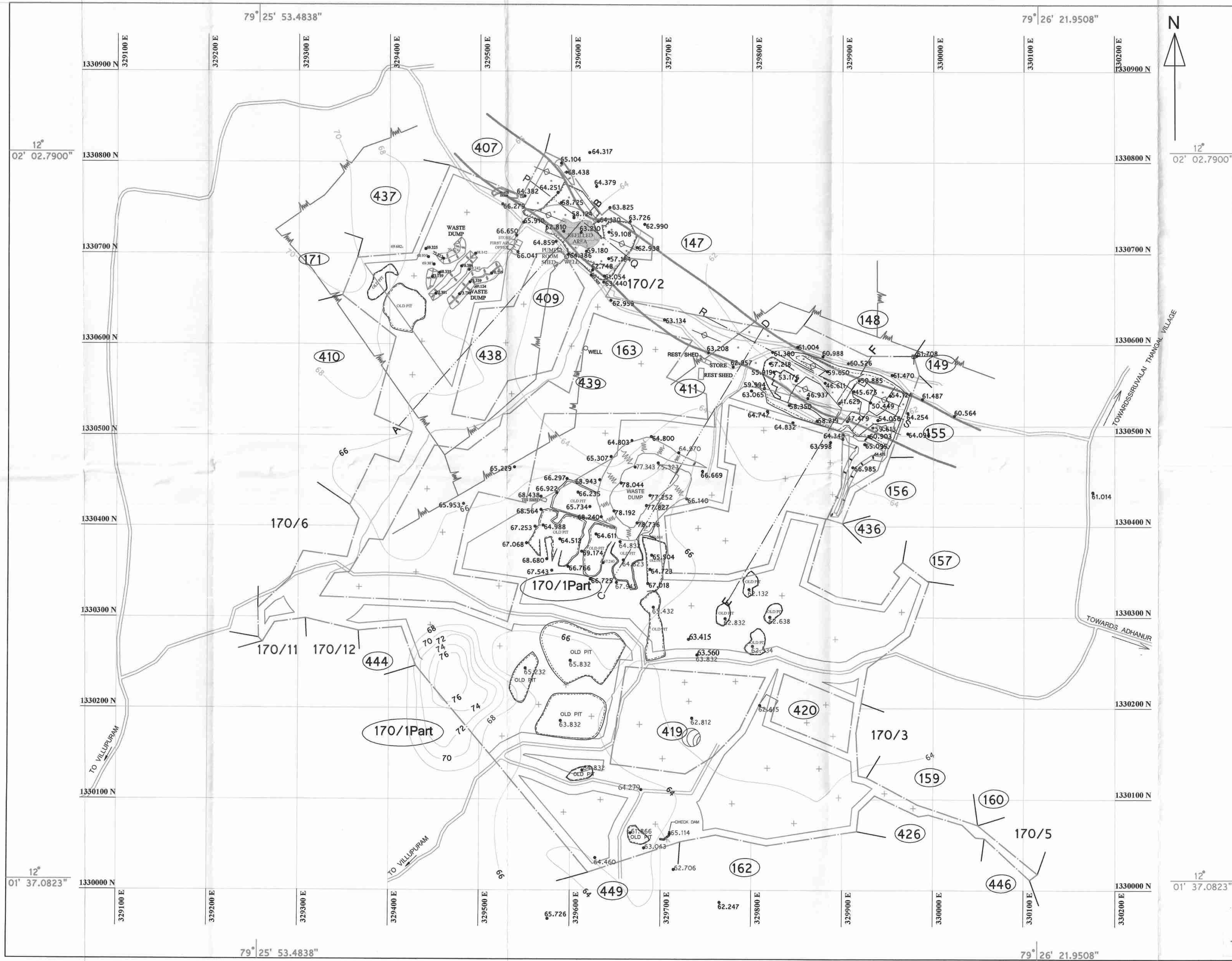
LEASE PLAN
MINING PLAN

APPLICANT : M/s.TAMILNADU MINERALS LIMITED,
 No.31, KAMARAJAR SALAI,
 CHEPAUK, CHENNAI - 600 005.

Certified that the PLAN is Correct

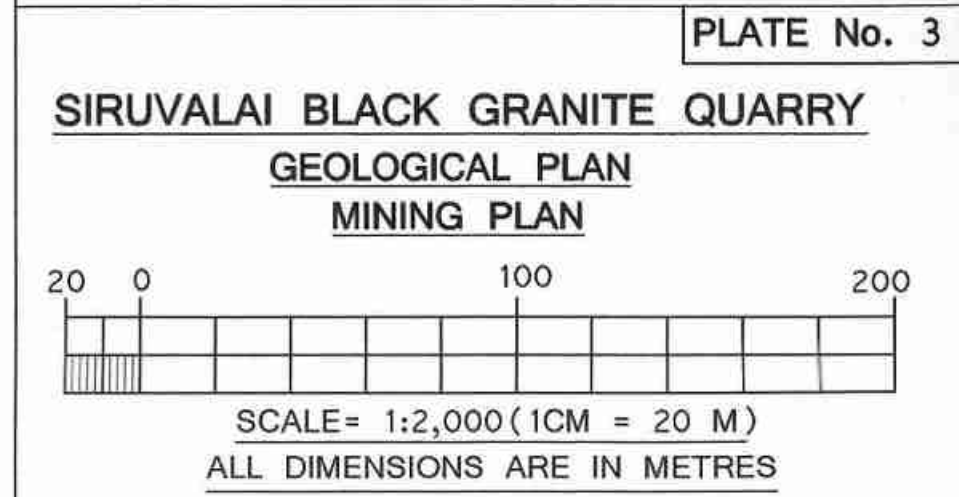
M. RAM SANKAR
 Mines Surveyor
 Certificate No: SVR/789,
 Tamil Nadu Minerals Limited.

Dr. E.GANESAN, Ph.D., PGDELP
 Qualified Person,
 Tamil Nadu Minerals Limited
 Chennai - 600 005.



LEGEND		
Sl.No.	DESCRIPTION	SYMBOL
1.	LEASE APPLIED BOUNDARY	---
2.	ROAD	==
3.	MINES APPROACH ROAD	---
4.	TEMPORARY SHED	[]
5.	CONTOUR (INTERVAL AT 2.0m)	96 94
6.	BENCH MARK	B.M 61.708
7.	OPENCAST WORKING PIT	[]
8.	ELECTRICAL POWER LINE	---
9.	EXISTING WASTE DUMP	[]
10.	BLACK GRANITE DYKE	---
11.	GRANITE GNEISS	[]
12.	STRIKE AND DIP	---
13.	SAFETY DISTANCE 7.5M FROM THE PROMBOKE LAND 10 M FROM THE PATTI LAND AND 50M FROM THE WATER BODIES AND ELECTRICAL POWER LINE	---

DISTRICT : VILLUPURAM
TALUK : VIKRAVANDI
VILLAGE NAME : SIRUVALAI
VILLAGE No. : 45
FIELD No. : 170/1 Part
LEASE APPLIED AREA: 20.28.0Hects. (170/1 Part)

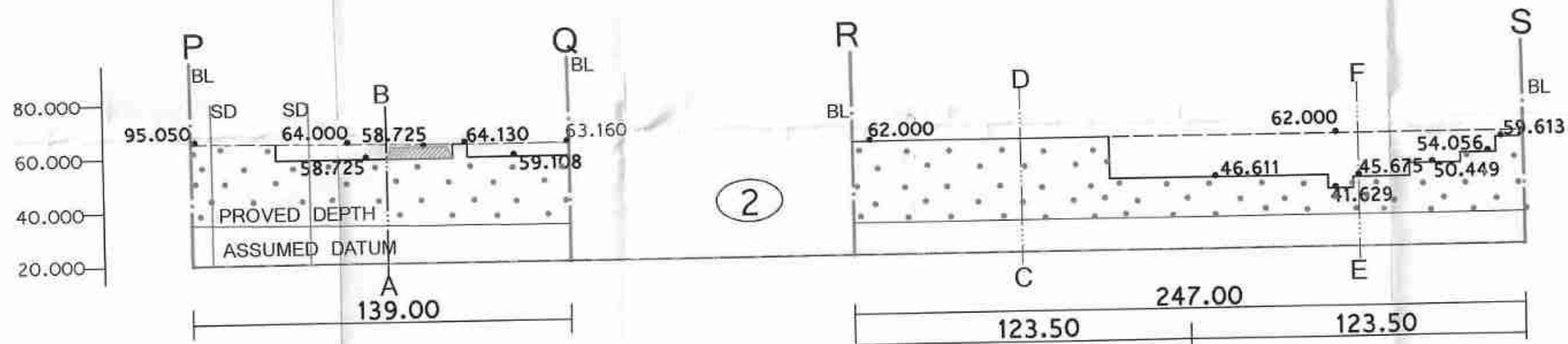


APPLICANT :-----
M/S.TAMILNADU MINERALS LIMITED
No.31, KAMARAJAR SALAI,
CHEPAUK, CHENNAI - 600 005.

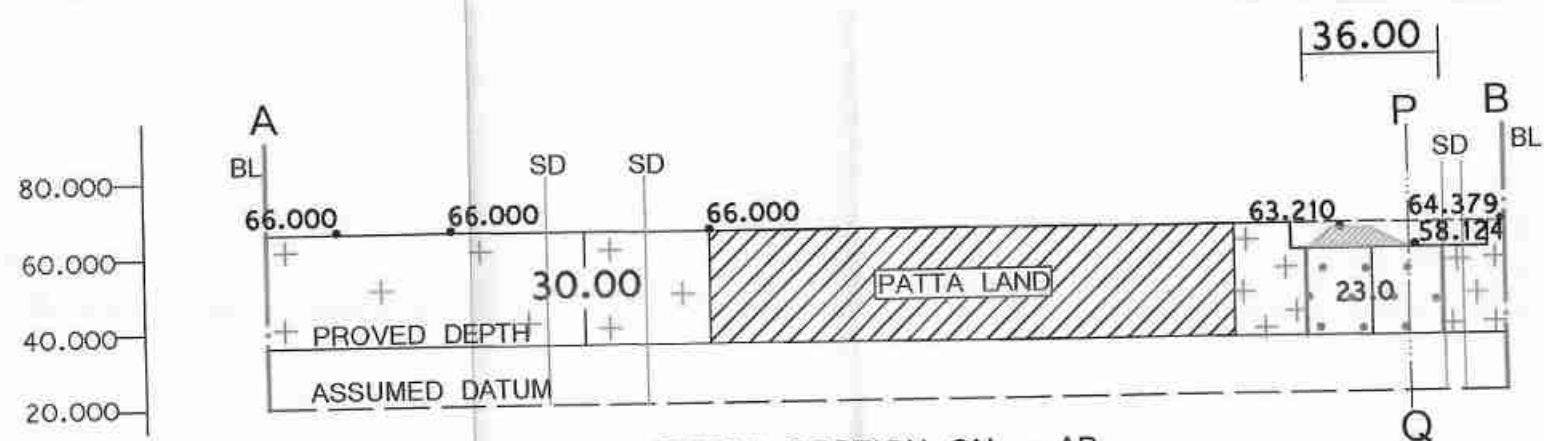
Certified that the PLAN is Correct.

M. RAM SANKAR
Mines Surveyor
Certificate No: SVR/789.
Tamil Nadu Minerals Limited.

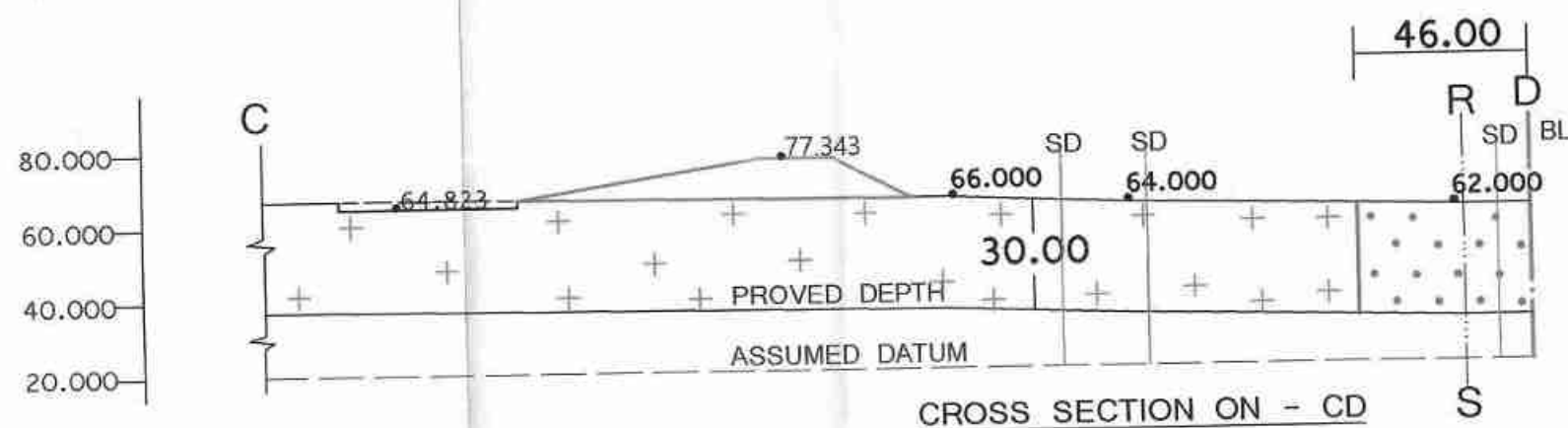
Dr. E.GANESAN, Ph.D., PGDLP
Qualified Person,
Tamil Nadu Minerals Limited
Chennai - 600 005.



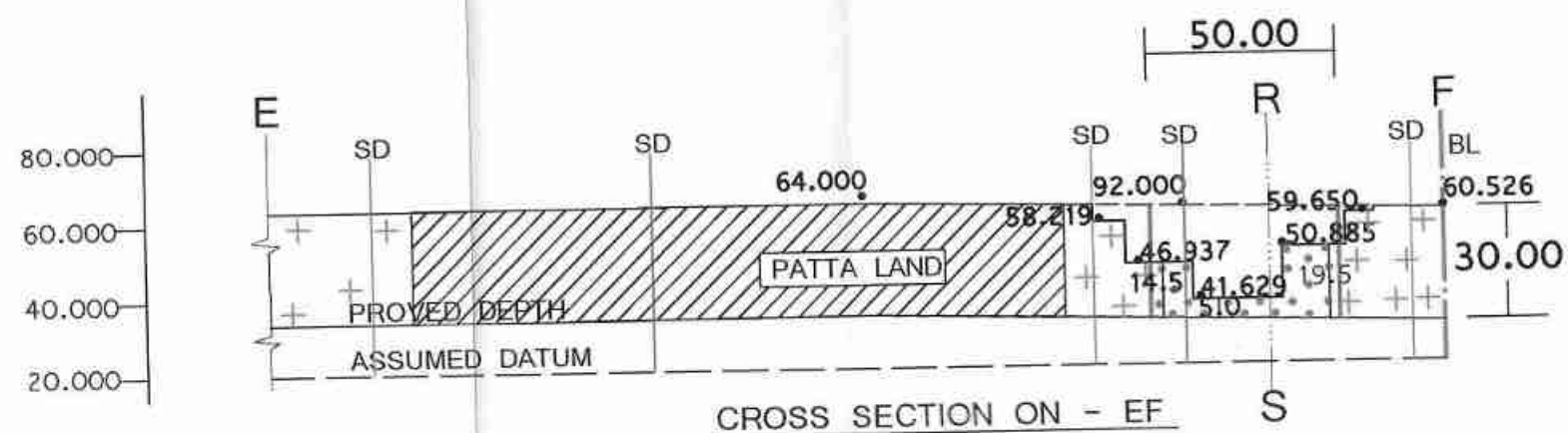
LONGITUDINAL SECTION ON - PQ RS



CROSS SECTION ON - AB



CROSS SECTION ON - CD



CROSS SECTION ON - EF

INDEX

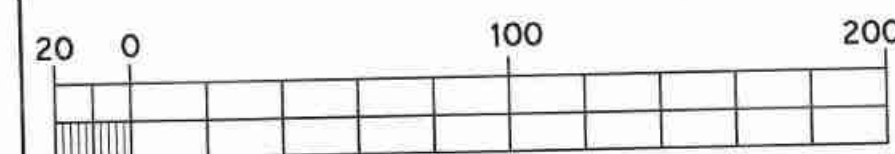
Sl.No.	DESCRIPTION	SYMBOL
1.	LEASE APPLIED BOUNDARY	
2.	OPENCAST WORKING PIT	▬
3.	WASTE DUMP	▨
4.	CONTOUR (INTERVAL AT 1.0m)	64 62
5.	BLACK GRANITE DYKE	— — —
6.	GRANITE GNEISS	+ + +
7.	SAFETY DISTANCE 7.5M FROM THE PROMBOKE LAND 10 M FROM THE PATTA LAND AND 50M FROM THE WATER BODIES AND ELECTRICAL POWER LINE	

DISTRICT : VILLUPURAM
TALUK : VIKRAVANDI
VILLAGE NAME : SIRUVALAI
VILLAGE No. : 45
FIELD No. : 170/1 Part
LEASE APPLIED AREA: 20-28.0Hects. (170/1 Part)



PLATE No.3a

SIRUVALAI BLACK GRANITE QUARRY GEOLOGICAL SECTIONS MINING PLAN



SCALE= 1:2,000 (1CM = 20 M)
ALL DIMENSIONS ARE IN METRES

APPLICANT:
M/S.TAMILNADU MINERALS LIMITED
No.31, KAMARAJAR SALAI,
CHEPAUK, CHENNAI - 600 005.

Certified that the PLAN is Correct.

M. RAM SANKAR
Mines Surveyor
Certificate No. SVR/789.
Tamil Nadu Minerals Limited.

Dr. E.GANESAN, Ph.D., PGDELP
Qualified Person,
Tamil Nadu Minerals Limited
Chennai - 600 005.

DETAILS OF DEPTH, BENCH AND PRODUCTION FOR MINING PLAN PERIOD

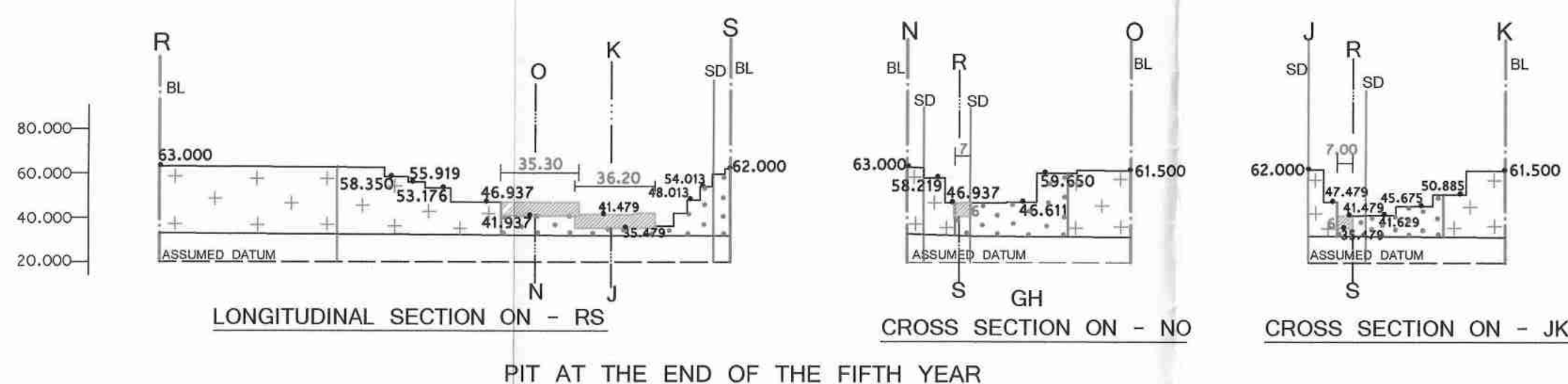
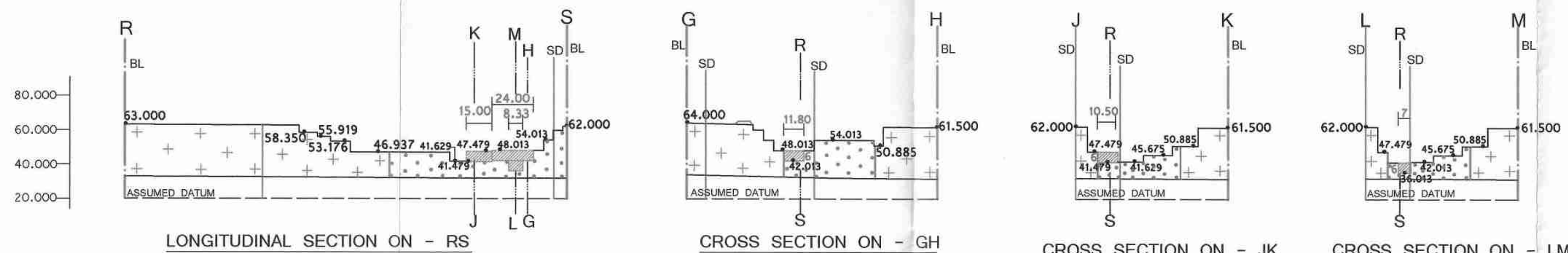
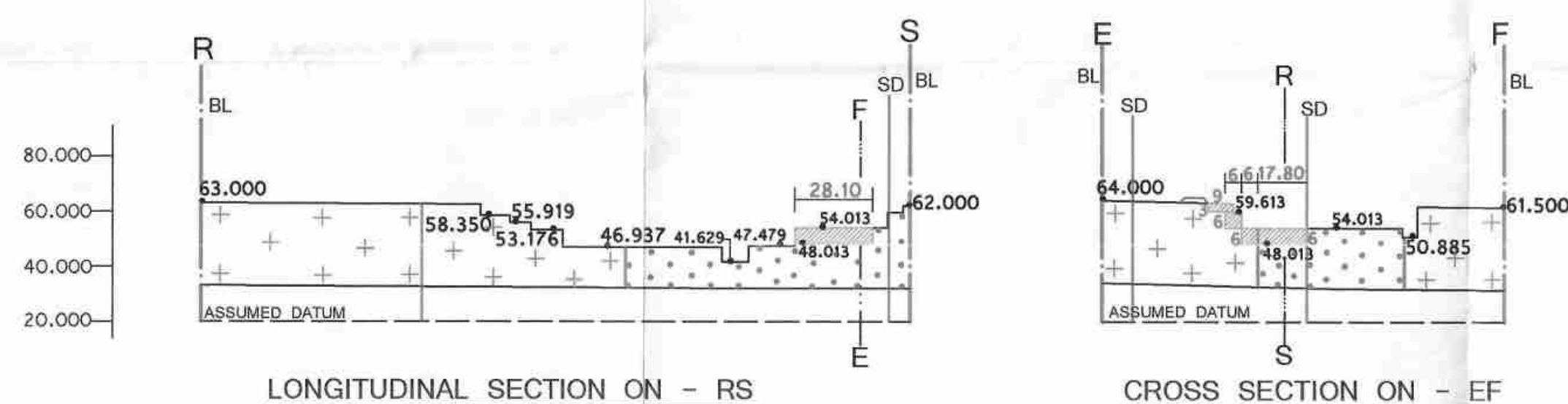
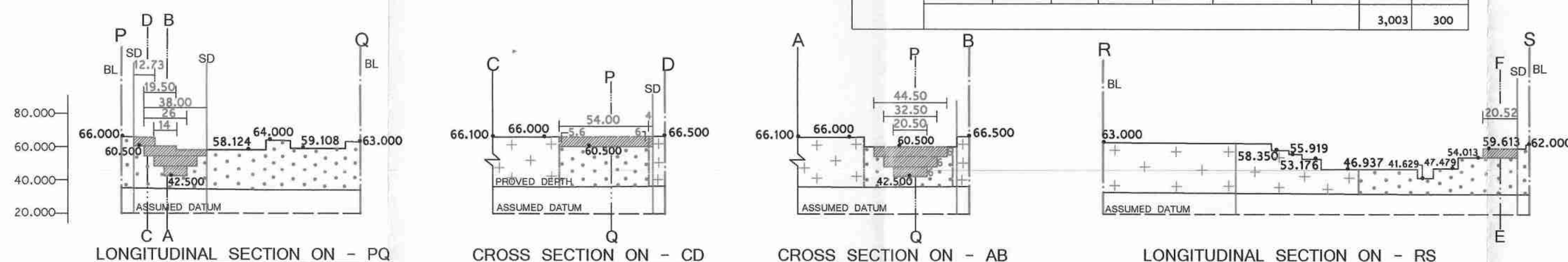
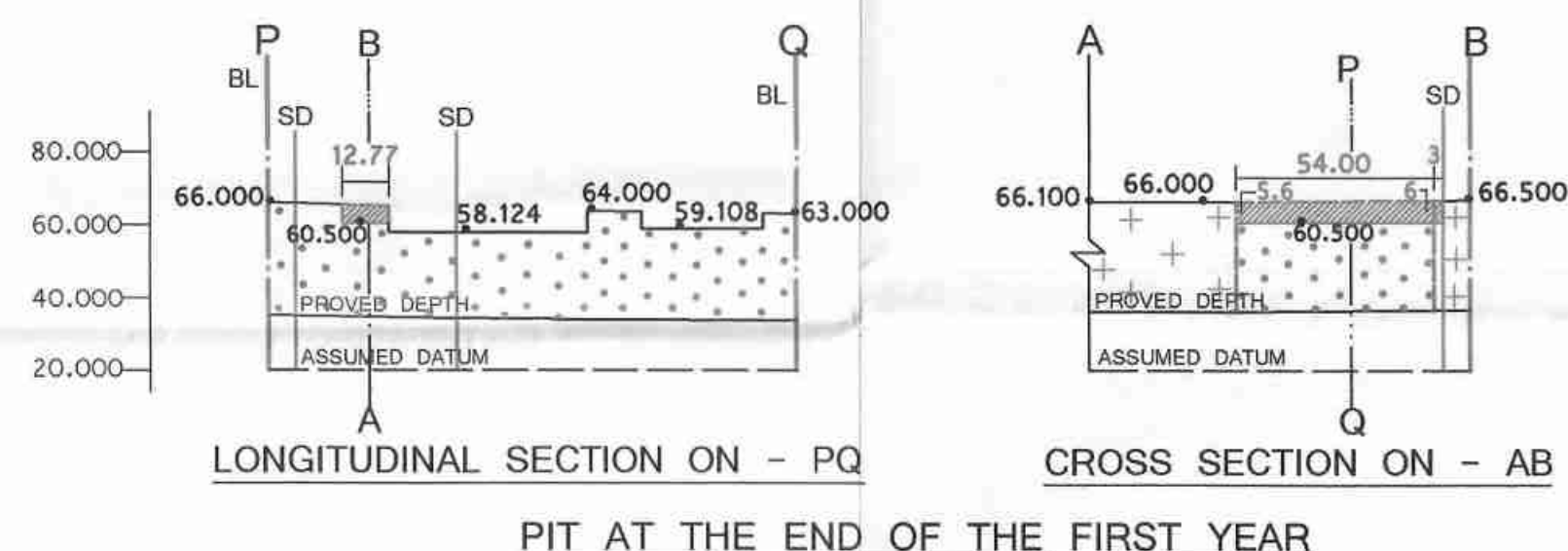
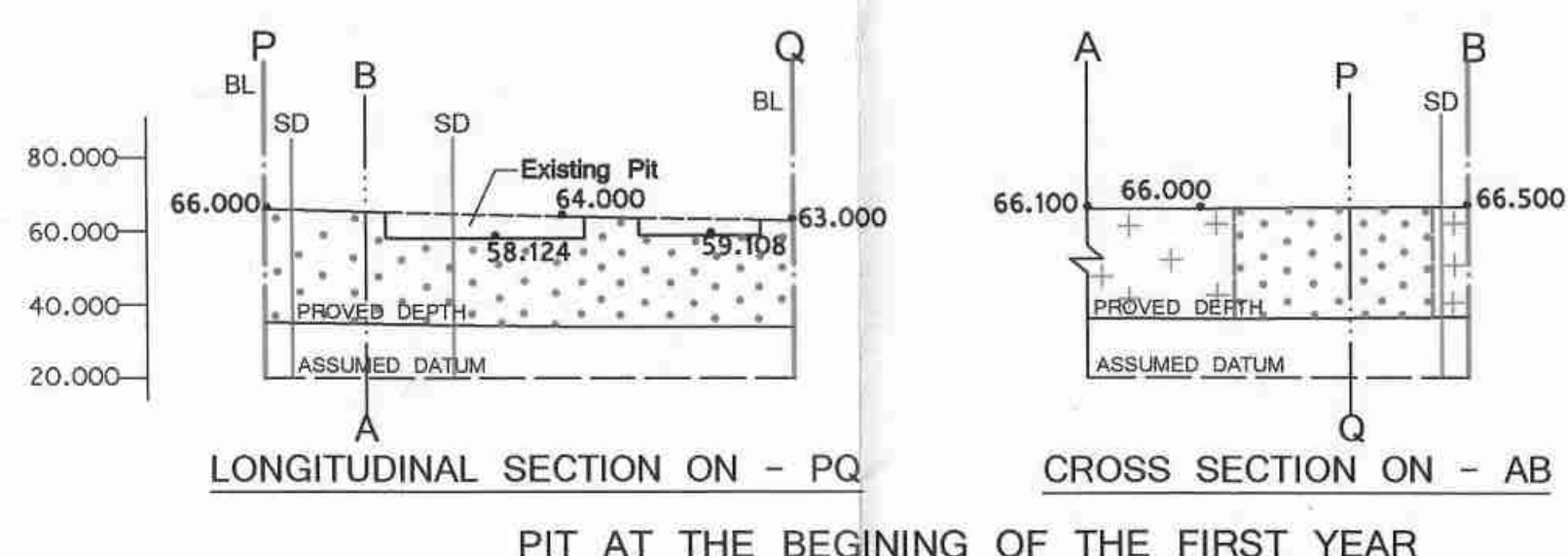
YEAR	Section	RL	Details of Depth (Average Measurements in M)				No. Of Benches Proposed	Proposed ROM in Cu.M.	Proposed Production @ 10% in Cu.M.
			Present	Proposed	Remaining	Total (Ultimate depth)			
FIRST YEAR	PQ & AB	66.500 TO 60.500	0	6.00	18.00	24.00	1	4,000	400
SECOND YEAR	PQ & CD	66.500 TO 60.500	0	6.00	6.00	12.00	1	3,987	
	PQ & AB	60.500 TO 42.500	6	18.00	0	24.00	3	14,468	
	RS & EF	59.613 TO 54.013	2.80	5.60	12.00	20.40	1	1,540	
THIRD YEAR	RS & EF	54.013 TO 48.013	8.40	6.00	6.00	20.40	1	3,001	300
FOURTH YEAR	RS & GH	48.013 TO 42.013	14.60	6.00	0	20.60	1	1,670	
	RS & JK	47.479 TO 41.479	12.00	6.00	6.00	24.00	1	945	
	RS & LM	42.013 TO 36.013	20.00	6.00	0	26.00	1	350	
FIFTH YEAR	RS & NO	46.937 TO 41.937	15.00	6.00	0	21.00	1	1,483	
	RS & JK	41.479 TO 35.479	18.00	6.00	0	24.00	1	1,520	
								3,003	300

LEGEND

Sl.No.	DESCRIPTION	SYMBOL
1.	LEASE APPLIED BOUNDARY	
2.	OPENCAST WORKING PIT	
3.	EXISTING WASTE DUMP	
4.	BLACK GRANITE DYKE	
5.	GRANITE GNEISS	
6.	SAFETY DISTANCE 7.5M FROM THE POROMBOKE LAND 10M FROM THE PATTI LAND 50M FROM THE WATER BODIES 50M FROM ELECTRICAL POWER LINE	

YEARWISE PRODUCTION/DEVELOPMENT

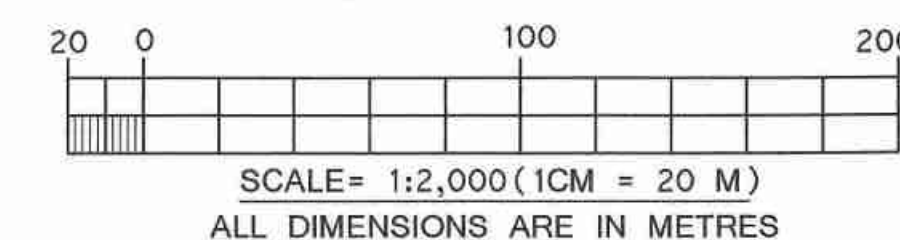
FIRST YEAR	
SECOND YEAR	
THIRD YEAR	
FOURTH YEAR	
FIFTH YEAR	



DISTRICT : VILLUPURAM
TALUK : VIKRAVANDI
VILLAGE NAME : SIRUVALAI
VILLAGE No. : 45
FIELD No. : 170/1 Part
LEASE APPLIED AREA: 20.28.0Ha.(170/1 Part)

PLATE No. 4a

SIRUVALAI BLACK GRANITE QUARRY
YEARWISE PRODUCTION/DEVELOPMENT
SECTIONS FOR THE FIRST FIVE YEARS
MINING PLAN

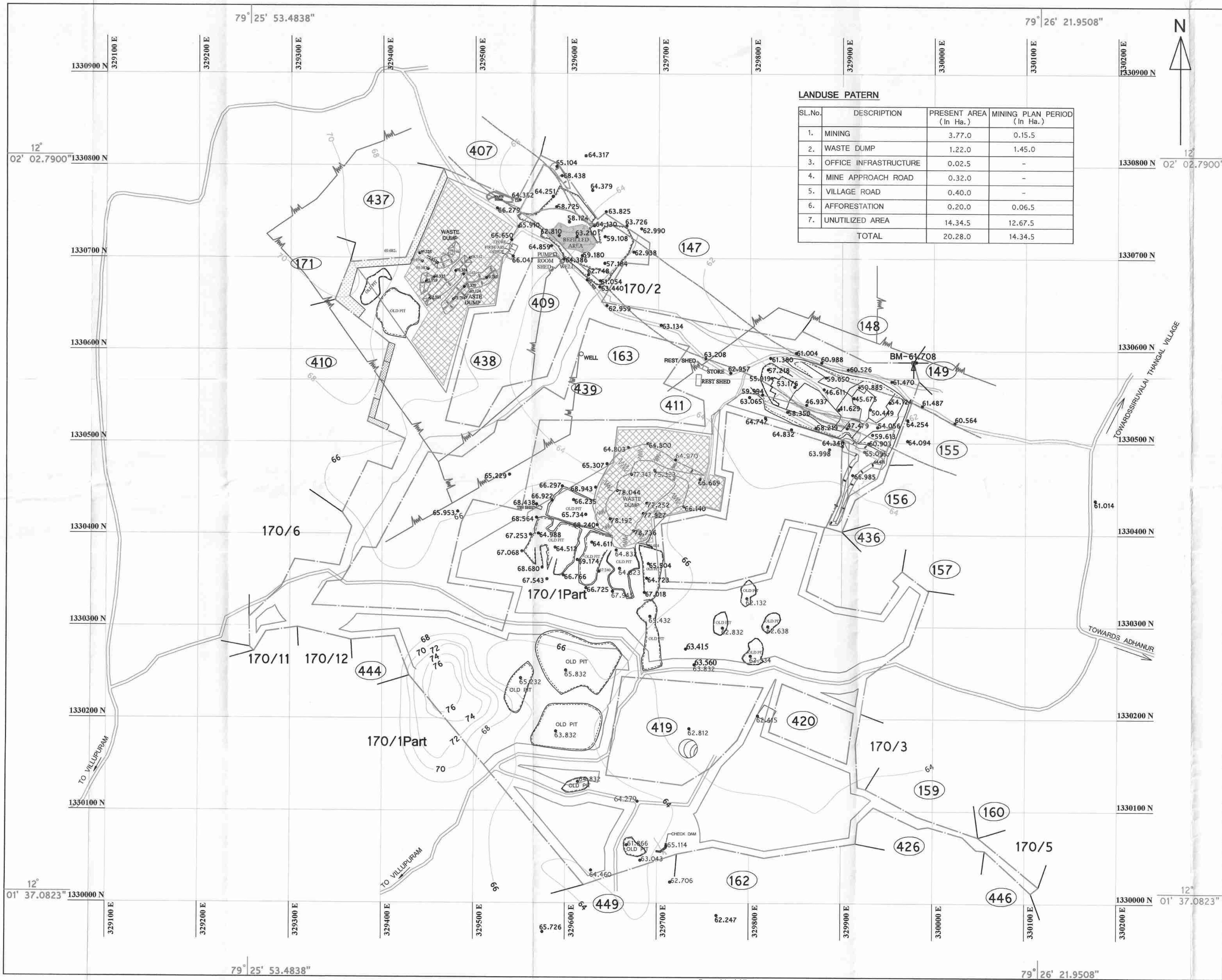


APPLICANT : M/S.TAMILNADU MINERALS LIMITED,
No.31, KAMARAJAR SALAI,
CHEPAUK, CHENNAI - 600 005.

Certified that the PLAN is Correct.

M. RAM SANKAR
Mines Surveyor
Certificate No: SVR/789.
Tamil Nadu Minerals Limited.

Dr. E.GANESAN, Ph.D., PGDELP
Qualified Person,
Tamil Nadu Minerals Limited
Chennai - 600 005.



LANDUSE PATERN			
SL.No.	DESCRIPTION	PRESENT AREA (In Ha.)	MINING PLAN PERIOD (In Ha.)
1.	MINING	3.77.0	0.15.5
2.	WASTE DUMP	1.22.0	1.45.0
3.	OFFICE INFRASTRUCTURE	0.02.5	-
4.	MINE APPROACH ROAD	0.32.0	-
5.	VILLAGE ROAD	0.40.0	-
6.	AFFORESTATION	0.20.0	0.06.5
7.	UNUTILIZED AREA	14.34.5	12.67.5
TOTAL		20.28.0	14.34.5

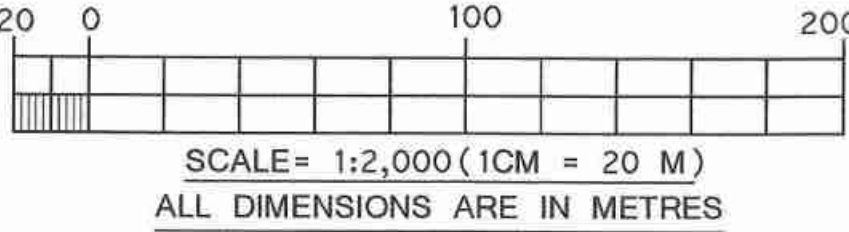
LEGEND		
Sl.No.	DESCRIPTION	SYMBOL
1.	LEASE APPLIED BOUNDARY	---
2.	ROAD	---
3.	MINE APPROACH ROAD	---
4.	TEMPORARY SHED	□
5.	CONTOUR (INTERVAL AT 2.0m)	64 62
6.	BENCH MARK	BM-61.708
7.	OPENCAST WORKING PIT	○
8.	ELECTRICAL POWER LINE	---
9.	EXISTING WASTE DUMP	■
10.	BLACK GRANITE DYKE	---
11.	PROPOSED PRODUCTION/DEVELOPMENT DURING MINING PLAN PERIOD	□
12.	PROPOSED WASTE DUMP DURING MINING PLAN PERIOD	■
13.	SAFETY DISTANCE 7.5M FROM THE POROMBOKE LAND 10M FROM THE PATTI LAND 50M FROM THE WATER BODIES 50M FROM ELECTRICAL POWER LINE	---

AFFORESTATION DETAILS	
EXISTING PLANTS	
FOR THE FIRST YEAR : 20 PLANTS IN 0.01.3Ha. 50% SURVIVAL	
FOR THE SECOND YEAR : 20 PLANTS IN 0.01.3Ha. 50% SURVIVAL	
FOR THE THIRD YEAR : 20 PLANTS IN 0.01.3Ha. 50% SURVIVAL	
FOR THE FOURTH YEAR : 20 PLANTS IN 0.01.3Ha. 50% SURVIVAL	
FOR THE FIFTH YEAR : 20 PLANTS IN 0.01.3Ha. 50% SURVIVAL	

DISTRICT : VILLUPURAM
TALUK : VIKRAVANDI
VILLAGE NAME : SIRUVALAI
VILLAGE No. : 45
FIELD No. : 170/1 Part
LEASE APPLIED AREA: 20.28.0Ha. (170/1 Part)

PLATE No. 5

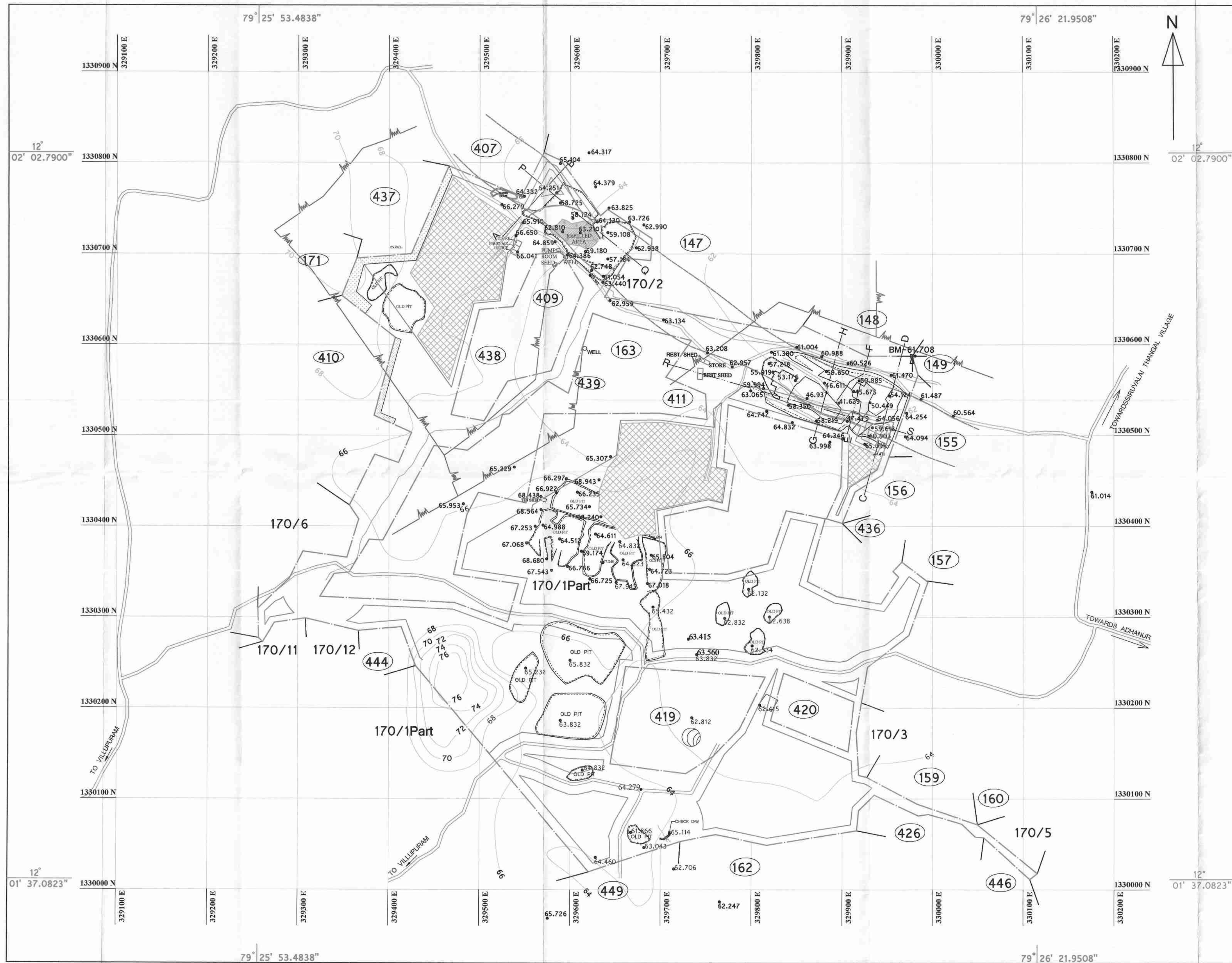
SIRUVALAI BLACK GRANITE QUARRY
LANDUSE AND AFFORESTATION PLAN
MINING PLAN



APPLICANT : M/S.TAMILNADU MINERALS LIMITED,
No.31, KAMARAJAR SALAI,
CHEPAUK, CHENNAI - 600 005.
Certified that the PLAN is Correct.

M. RAM SANKAR
Mines Surveyor
Certificate No: SVR/789,
Tamil Nadu Minerals Limited.

Dr. E.GANESAN, Ph.D., PGDELP
Qualified Person,
Tamil Nadu Minerals Limited
Chennai - 600 005.



LEGEND		
Sl.No.	DESCRIPTION	SYMBOL
1.	LEASE APPLIED BOUNDARY	---
2.	ROAD	==
3.	MINE APPROACH ROAD	---
4.	TEMPORARY SHED	[]
5.	CONTOUR (INTERVAL AT 2.0m)	64 62
6.	BENCH MARK	BM-61.708
7.	OPENCAST WORKING PIT	⬮
8.	ELECTRICAL POWER LINE	— — —
9.	BLACK GRANITE DYKE	----
10.	SAFETY DISTANCE 7.5M FROM THE POROMBOKE LAND 10M FROM THE PATTI LAND 50M FROM THE WATER BODIES 50M FROM ELECTRICAL POWER LINE	
11.	ULTIMATE PIT LIMIT	[]
12.	ULTIMATE WASTE DUMP	[X]
13.	ULTIMATE AFFORESTATION	[.]

LANDUSE PATTERN		
Sl.No.	DESCRIPTION	AREA AT THE END OF LIFE OF THE QUARRY (In Ha.)
1.	MINING	3.92.5
2.	WASTE DUMP	2.59.0
3.	OFFICE INFRASTRUCTURE	0.02.5
4.	MINE APPROACH ROAD	0.32.0
5.	VILLAGE ROAD	0.40.0
6.	GREEN BELT	0.26.5
7.	UNUTILIZED AREA	12.75.5
TOTAL		20.28.0

DISTRICT : VILLUPURAM
TALUK : VIKRAVANDI
VILLAGE NAME : SIRUVALAI
VILLAGE No. : 45
FIELD No. : 170/1 Part
LEASE APPLIED AREA: 20.28.0Ha. (170/1 Part)



PLATE No. 6

SIRUVALAI BLACK GRANITE QUARRY
MINE CONCEPTUAL PLAN
MINING PLAN

20 0 100 200

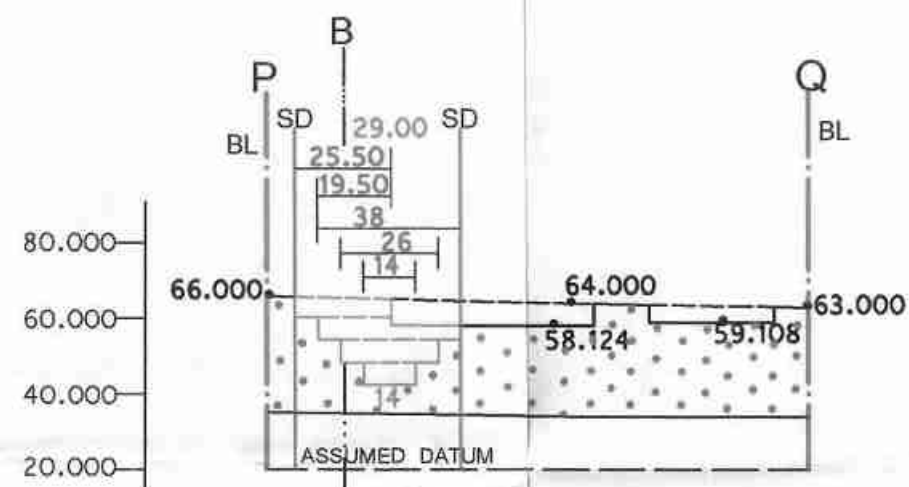
SCALE = 1:2,000 (1CM = 20 M)
ALL DIMENSIONS ARE IN METRES

APPLICANT : M/S.TAMILNADU MINERALS LIMITED,
No.31, KAMARAJAR SALAI,
CHEPAUK, CHENNAI - 600 005.

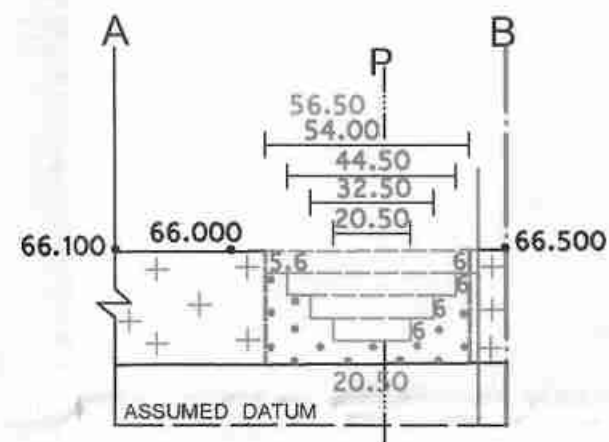
Certified that the PLAN is Correct.

M. RAM SANKAR
Mines Surveyor
Certificate No: SVR/789.
Tamil Nadu Minerals Limited.

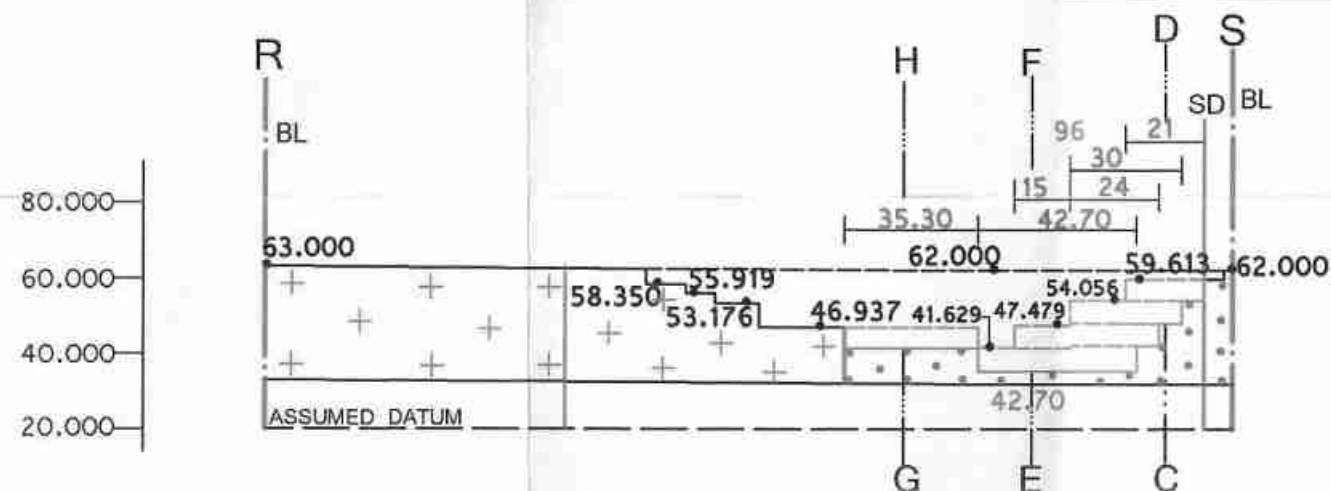
Dr. E.GANESAN, Ph.D., PGDLP
Qualified Person,
Tamil Nadu Minerals Limited
Chennai - 600 005.



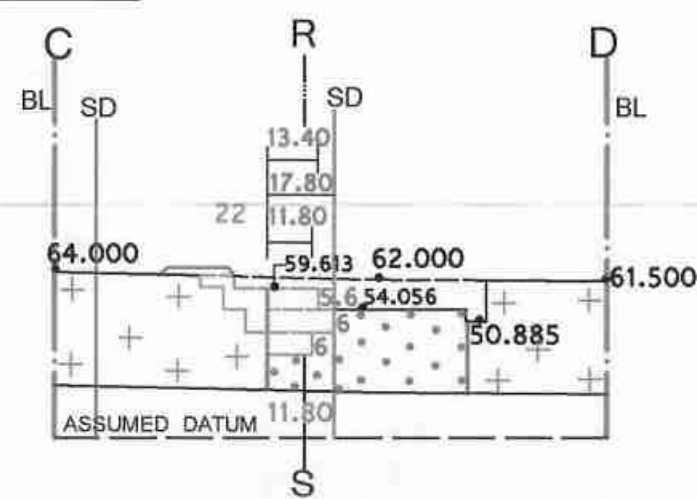
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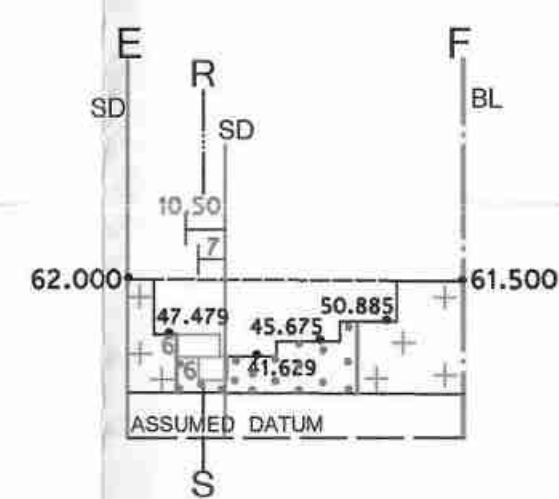
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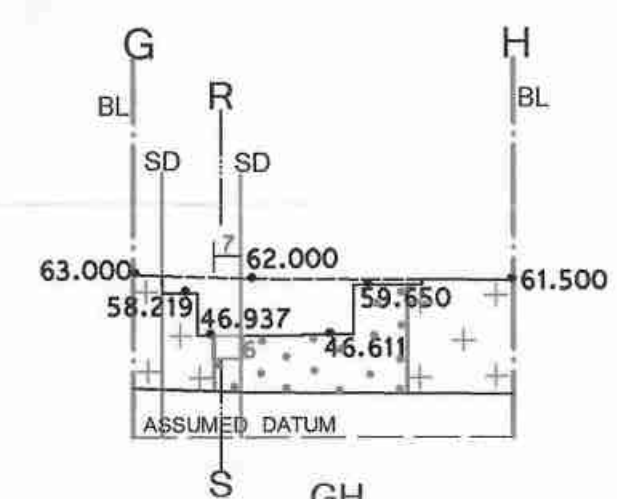
LONGITUDINAL SECTION ON - RS



CROSS SECTION ON - CD



CROSS SECTION ON - EF



CROSS SECTION ON - GH

LEGEND

Sl.No.	DESCRIPTION	SYMBOL
1.	LEASE APPLIED BOUNDARY	---
2.	OPENCAST WORKING PIT	▭
3.	EXISTING WASTE DUMP	▭
4.	BLACK GRANITE DYKE	---
5.	GRANITE GNEISS	++
6.	SAFETY DISTANCE 7.5M FROM THE POROMBOKE LAND 10M FROM THE PATTAL LAND 50M FROM THE WATER BODIES 50M FROM ELECTRICAL POWER LINE	---
7.	ULTIMATE PIT LIMIT	---

ULTIMATE PIT DIMENSION

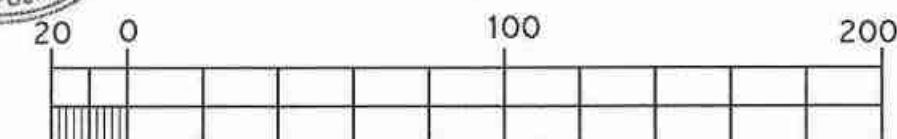
Sl.No.	Section on	Detail	Ave.Length in M	Ave.Width in M	Depth in M
1.	P-Q & A-B	Top bench	29.00	56.50	24.00
		Bottom bench	14.00	20.50	
2.	R-S & C-D, E-F and G-H	Top bench	96.00	13.20	24.00
		Bottom bench	42.70	8.60	

DISTRICT : VILLUPURAM
TALUK : VIKRAVANDI
VILLAGE NAME : SIRUVALAI
VILLAGE No. : 45
FIELD No. : 170/1 Part
LEASE APPLIED AREA: 20.28.0Ha. (170/1 Part)



SIRUVALAI BLACK GRANITE QUARRY

CONCEPTUAL SECTIONS MINING PLAN



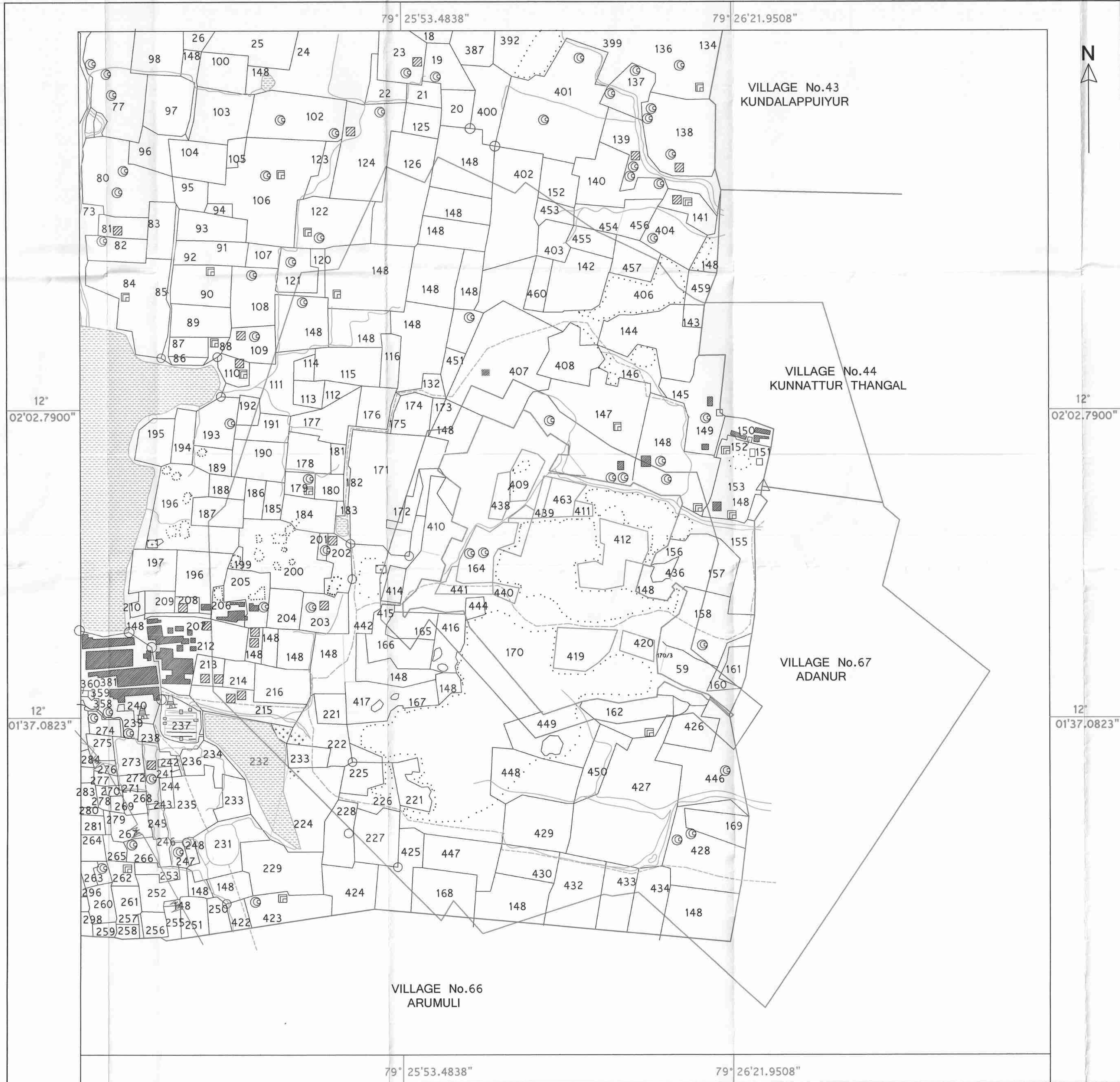
SCALE = 1:2,000 (1CM = 20 M)
ALL DIMENSIONS ARE IN METRES

APPLICANT : M/S.TAMILNADU MINERALS LIMITED,
No.31, KAMARAJAR SALAI,
CHEPAUK, CHENNAI - 600 005.

Certified that the PLAN is Correct.

M. RAM SANKAR
Mines Surveyor
Certificate No: SVR/789.
Tamil Nadu Minerals Limited.

Dr. E.GANESAN, Ph.D., PGDELP
Qualified Person,
Tamil Nadu Minerals Limited
Chennai - 600 005.

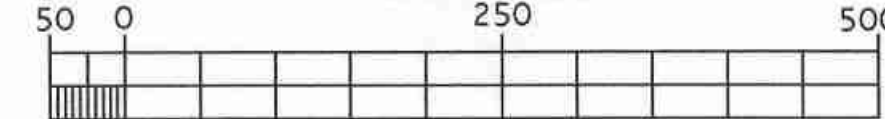


LEGEND		
Sl.No.	DESCRIPTION	SYMBOL
1.	LEASE APPLIED BOUNDARY	
2.	ROAD	
3.	KULAM / ERI	
4.	STREAM	
5.	WELL	
6.	VILLAGE BOUNDARY	
7.	BUFFER ZONE 500m RADIUS	
8.	SAFETY ZONE 60m RADIUS	
9.	SURVEY FIELD No.	410,170/Part

DISTRICT : VILLUPURAM
TALUK : VIKRAVANDI
VILLAGE No. : 45
VILLAGE NAME : SIRUVALAI
FIELD No. : 170/1 Part
LEASE APPLIED AREA : 20.28.5Hects.



PLATE No.7
**SIRUVALAI BLACK GRANITE QUARRY
ENVIRONMENT PLAN
MINING PLAN**



SCALE = 1:5000 (1Cm=50mts)
ALL DIMENSIONS ARE IN METRES

APPLICANT: M/s.TAMILNADU MINERALS LIMITED,
No.31, KAMARAJAR SALAI,
CHEPAUK, CHENNAI - 600 005.

Certified that the PLAN is Correct

M. RAM SANKAR
Mines Surveyor
Certificate No: SVR/789.
Tamil Nadu Minerals Limited.

Dr. E.GANESAN, Ph.D., PGDLP
Qualified Person,
Tamil Nadu Minerals Limited
Chennai - 600 005.

ML

DEPARTMENT OF GEOLOGY AND MINING



From
Thiru.E.Saravanelraj, I.A.S.,
Director,
Department of Geology and Mining,
Guindy, I. E., Chennai – 600 032.

To
The Managing Director,
Tvl.Tamin Ltd.,
No.31, Kamarajar Salai,
TWAD House,
Chepauk, Chennai - 5.

Rc.No.18/MM4/2020 dated 03.07.2020

Madam,

Sub: Mines and Minerals – Minor Mineral – Black Granite – Villupuram district – Vikkiravandi taluk – Siruvalai village – Over an Extent of 20.28.0ha of Poramboke lands – S.F.No.170/1(P) - Quarry lease granted to Tvl.Tamin Ltd. - Mines operated without Environmental Clearance – Cost of mineral remitted to an amount of Rs.78,66,679/- - Report received from the District Collector, Villupuram – NOC requested by the lessee company – Issued – Reg.

- Ref: 1. G.O (3D) No.285 Industries (MME1) Department dated 28.12.1995.
2. Order of the Hon'ble Supreme Court civil No.114/2014 dated 02.08.2017.
3. Tvl.Tamin Ltd., letter No.265/P/2018 dated 09.12.2019 & 24.01.2020.
4. District Collector, Villupuram letter in Rc.No.A/G&M/544/2018 dated 26.12.2019 & 11.06.2020.

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Kind attention is invited to the references cited.

2) Tvl.Tamin Ltd., was granted a quarry lease for quarrying black granite over an extent of 20.28.0 ha of poramboke lands in S.F.No.170/1(P) in Siruvalai village, Vikkiravandi taluk, Villupuram district for a period of 20 years under Rule 8-C of Tamil Nadu Minor Mineral Concession Rules, 1959 vide G.O (3D) No.285 Industries (MME1) Department dated 28.12.1995. The lease is executed on 25.07.1996 and the lease period is valid upto 24.07.2016.

3) As per the Hon'ble Supreme Court order dated 02.08.2017 in W.P. Civil No.114/2014 in the matter of Common Cause Vs Union of India and Ors. has passed a detailed order interpreting Section 21(5) of the MMDR Act, 1957 and directing that wherever violations were carried out, 100% cost value of the mined mineral without environmental clearance needs to be compensated by the mining entity / project proponent.

581000

4) In this regard, the District Collector, Villupuram has stated that the lessee company had operated the above said quarry in the violation period from 15.01.2016 to 10.01.2017 and obtained transport permit for a quantity of 374.016 cbm. Hence, the lessee company is liable for remittance of 100% cost of mineral. Therefore, as per the demand notice issued by the District Collector, the lessee company has paid the cost of mineral of Rs.78,66,679/- vide challan no.21 dated 09.12.2019 for the mineral transported without environment clearance. Hence, the District Collector, Villupuram requested to issue necessary NOC to Tvl.Tamin Ltd., for getting environmental clearance

6) Therefore, as the lessee company has paid the cost of mineral for the mineral transported in the violation period without environment clearance and based on the recommendation of the District Collector, Villupuram, No Objection Certificate is issued to Tvl.Tamin Ltd., for getting environment clearance for the quarry located in S.F.No.170/1(P) over an extent of 20.28.0 ha of poramboke land in Siruvalai village, Vikkiravandi taluk, Villupuram district subject to a condition that Tvl.Tamin Ltd., should remit excess dues any if arises in future in this regard.

Sd /- E.Saravanelraj,
Director of Geology and Mining

Forwarded / By Order

Joint Director

6.17
09/12/2019

RECEIVED