DISTRICT SURVEY REPORT FOR GRAVEL

VIRUDHUNAGAR DISTRICT

TAMILNADU STATE

(Prepared as per Gazette Notification S.O.3611 (E) dated 25.07.2018 of Ministry of Environment, Forest and Climatic Change)

PREFACE

In Compliance to the Notification Issued by the Ministry of Environment, Forest and Climate change Dated15.01.2016, and its subsequent amended notification S.O.3611(E) dated 25.07.2018, the District Survey Report shall be prepared for each minor mineral in the district separately by the District Environment Impact Assessment Authority (DEIAA)with assistance of irrigation department, Drainage department, Forest department, Mining department and Revenue department in the district. Accordingly District Survey Report for the mineral Limekankar has been prepared as per the procedure prescribed in the notification S.O.3611(E) dated 25.07.2018 of Ministry of Environment, Forest and Climate Change. Every effort have been made to cover mining locations, areas & overview of Mining activity in the district with all its relevant features pertaining to geology & mineral wealth in replenishable and non-replenishable areas. This report will be a model and guiding document which is a compendium of available mineral resources, geographical setup, environmental and ecological setup of the District and is based on data of various departments, published reports and websites.

1.INTRODUCTION

Virudhunagar District came into existence by the bifurcation of Ramanathapuram District vide State Government Notification, G.O. Ms. 347 dated 8.3.1985. It is bounded on North by Madurai and Sivagangai District, South by Tirunelveli and Tuticorin District, East by Ramanathapuram District, West by Kerala State and NorthWest by Theni District. The district headquarters is Virudhunagar town. It covers an area of 4232 sq.km. Virudhunagar District consists of 3 Revenue divisions namely Sivakasi, Aruppukottai and Sattur, 9 Taluks, namely Aruppukkottai, kariapatti, Rajapalayam, Sattur, Sivakasi, Srivilliputur, Tiruchuli, Virudhunagar and Vembakottai, 39 Firkas and 600 Revenue Villages. It is located at on interactive map 11°00′N77°28” ′E/12°N78°50”′E.

Virudhunagar is endowed with minor mineral resources like, granite (Leptynite), blue metal, gravel, brick soil, Limekankar, Clay (others) and sand deposit and the crystalline limestone is major mineral resource in the District.

As a result of developmental activities and market demand for minor minerals, mining of minor mineral is vital. The mining if not carried out systematically, will result in ill-effects and environmental degradation in project effected area. Therefore a sustainable development of the area involving extraction of mineral wealth vis-à-vis protection of environment is the ultimate solution for betterment of mankind. With the objective of generating Virudhunagar District Survey Report for minor minerals, a ten days collaborative field work was carried out by Virudhunagar District Geology and Mines Department and Geological Survey of India to locate minor minerals, along with mining activities in the District.

2. OVERVIEW OF MINING ACTIVITY IN THE DISTRICT

The Mining of minor minerals like Limekankar, Blue metal, Dimension stone, brick sand and Gravels are active in the district. Private companies play a major role in mining activity for minor minerals, whereas the Government agency like TAMIN takes part in mining dimension stones in the district. The major mineral crystalline limestone is being mined by private parties like Ramco Cements Limited and Tamilnadu State Government owned Tamilnadu Cement Corporation Limited for captive cement production and other small private parties. In total, 143 no's quarry leases for blue metal/rough stone have been sanctioned for road and building material, some leases for making M-sand, 34 granite (leptynite) quarry leased for dimension stone, 26 leases were granted for limestone to private parties to supply as a raw materials for cement manufacturing and soap industries, 9 gravel and 12 brick earth quarries are leased for road material and making bricks.

3. GENERAL PROFILE OF THE DISTRICT

An attempt has been made in this section to describe the profile of the study area, Virudhunagar District, in terms of origin, location, administrative set up, area classification on the basis of area and human resources, agricultural resources, trade and commerce.

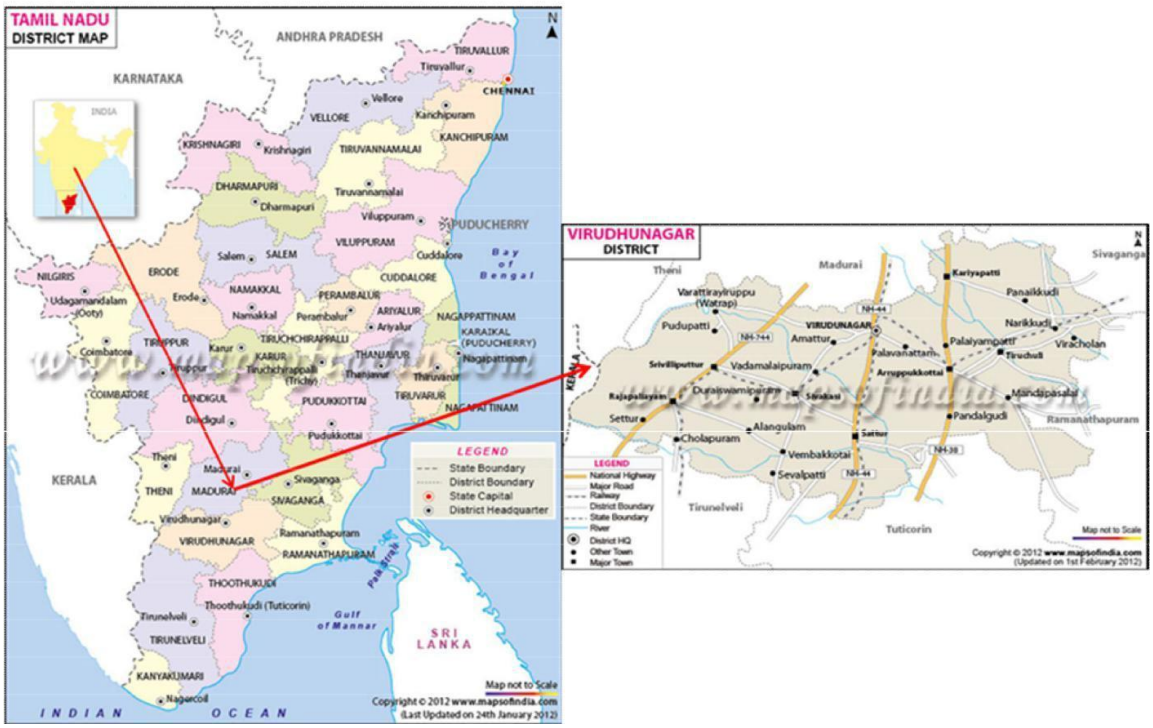
3.1 Origin

The erstwhile Ramanathapuram District was formed on first June, 1910 by carving out certain portions from Madurai and Tirunelveli Districts. The Government of Tamil Nadu decided to dividethe large Districts into small Districts in order to ensure an effective and transparent administration. To fall in line with the above policy, the Government trifurcated the erstwhile Ramanthapuram, District into Kamarajar District, Ramanathapuram District and Pasumpon District.Kamarajar District was formed on 15th July, 1984 and was named after the freedom fighter and former Chief Minister of Tamil Nadu, Sri. K. Kamaraj. The District started functioning on 15th March 1985. Subsequently the name of the district changed from Kamarajar to Virudhunagar on 1st July, 1997. Now, the District is functioning with Virudhunagar as its headquarters.

3.2 Location

The Virudhunagar District is located between 11°00’ and 12°00’ North Latitudes and 77°28’ and 78°50’ East Longitudes. It has an area of about 4243 square kilometers. It is bounded by the Western Ghats in West, Madurai District in North, Sivagangai District in North East, Ramanathapuram District in South-East and Thoothukkudi District in South. The location map of the Virudhunagar District is shown in Plate No 1.

PLATE NO: 1. LOCATION MAP OF VIRUDHUNAGAR DISTRICT



3.3 Area and Population

According to the Director of Statistics, Chennai, the Virudhunagar District covers an area of 4243 square kilometers or 1638 square miles. Virudhunagar District occupies the fifteenth rank among the Districts of the State of Tamil Nadu with regard to its size. The population of the District is 15,65,037. Of this total population, 7, 84,912 (50.15 per cent) are males and the remaining 7, 80,125 (49.85 per cent) are females.

3.4 Administrative Set-up

Virudhunagar District has been divided into three Revenue Divisions for administrative convenience, one at Sivakasi comprising Sivakasi and Srivilliputhur, the second one at Sattur covering Sattur, Rajapalayam and Vembakottai Taluks and the third one at Aruppukottai covering Aruppukottai, Kariapatti, Virudhunagar and Thiruchuli Taluks. It has 11 community development blocks namely, Rajapalayam, Sivakasi, Virudhunagar, Sattur, Aruppukottai, Vembakottai, Srivilliputhur, Watrap, Thiruchuli, Narikudi and Kariapatti. Seven municipalities namely, Aruppukottai, Virudhunagar, Sattur, Sivakasi, Srivilliputhur , Rajapalayam and Thiruthangal, 600 revenue villages, 464 village panchayats, 11 panchayat Unions and 10 town panchayats. It falls part of two parliamentary constituencies and seven assembly constituencies.

3.5 Agricultural Resources and Irrigation

Agriculture is the predominant occupation of the District. Nearly 66.3% of the total population of the District is dependent on agriculture and its allied occupations. The District is a drought prone District. The most striking feature of the District is the absence of dependable irrigation sources like perennial rivers.

Assured irrigation is available through wells only for 57 per cent. The remaining area is irrigated by rain fed tanks. The reservoirs namely Periyar and Kovilar at Pilavakkal in Watrap irrigate about 3000 hectares through 40 tanks. There are also a number of irrigation schemes like Anaikuttam, Kullursandai, Vembakottai and Golwarpatti. More than half of the total geographical area of the District is being utilized for cultivation and net

cultivated area amounts to 2,70,800 hectares. About 7.4 percent of the cultivated area falls under double cropping; 5.82 per cent is covered by forests; 2.8 per cent is not suitable for cultivation. The permanent pasture and other fallow land constitute 15.67 per cent of the total area. Paddy, cumbu, sugarcane, groundnut, cotton, cholam, maize, ragi, varagu, plantain, samai, chillies, greengram, blackgram, horsegram, and gingelly are the important crops of the District. Paddy is the most predominant crop and it is cultivated in 27,892 hectares. Cotton is the next important crop grown in 38,859 hectares. Cotton is intensively cultivated in Rajapalayam, Srivilliputhur and Aruppukottai taluks. Teak and other trees are grown in some parts of the Western Ghats. The plains of Sattur taluk have black soil which is locally known as Karisal. This soil is suitable for cotton cultivation.

3.6 Trade and Commerce

Internal trade of the District is developing on a large scale. Fireworks, matches, polythene articles, litho-printed calendars, posters, diaries and the like are manufactured in Sivakasi. These products enter the markets situated in the different parts of the country. The products, which are produced in the District, have got insignificant local market. Market Committees are functioning in the District for the purchase and sale of cotton, groundnut, jaggery, chilli and other products.

A number of studies are held in the District at various places for helping the rural folk to purchase and sell their products such as food grain, vegetables, groceries, textiles, cattle.

There are two warehouses in this District, one at Virudhuangar and the other at Rajapalayam. The commodities of the chief wholesale trading in the District are pulses, cotton, groundnut and coffee (Virudhunagar block), cotton and groundnut (Rajapalayam block) and chillies (Sattur block).

4. GEOLOGY OF THE DISTRICT

The most of the area in Virudhunagar District is covered by a vast tract of black soil with residual hills and knolls. Since the area is covered by thick pediments, the geology of the area is studied in available exposure and quarry section opened up for limestone, dimension stone and blue metals for

various purposes. The area exposes Khondalite Group of rocks and migmatite gneisses of Precambrian (V.R.Sowmi Narayanan, etal.,). The Khondalite Group of rocks comprises Charnockite, crystalline limestone/calc gneiss, garnetiferous quartzofeldspathic gneiss (leptynite), all these litho units probably represent a sequence of metamorphosed sedimentary units of arenaceous, calcareous and argillaceous composition with various intermixtures of different proportions (V.R.Sowmi Narayanan, etal.,). Granite and quartz veins form the younger intrusive.

4.1 Charnockite:

Generally, the Charnockite is grey to greenish colored, coarse to medium grained, greasy nature with or without garnet. Because of the limited outcrops, the quarry sections are studied to infer the various interrelationships between the litho units. Charnockite is interbanded nature with crystalline carbonate rocks are observed in most of the limestone quarry in Pandalgudi, Lakshmipuram, Gopalapuram villages (Field photograph. 1), suggested a metasedimentary origin for the charnockite (V.R.Sowmi Narayanan, etal.,). Weathering of the Charnockite on the surface gives a deceptive look of gneiss and in the quarry sections at depth the fresh charnockite is exposed, which are well exemplified in almost all the Charnockite quarry sections. The specks of pyrites within the charnockite are seen in the Duraisamypuram village. Banded charnockite is observed in Gopalapuram rough stone quarry (Field photograph. 2).

Field photgraph 1. Interbanded nature of Charnockite and crystalline limestone in Pandalgudi village.

Field photgraph 2. Banded Charnockite is noticed in Gopalapuram village rough stone quarry.

4.2 Migmatite:

The Charnockite shows migmatisation is noticed in hill locating East of Kalasalingam university, where the rock exposes segregation of mafic and felsic layers with ptygmatic folds showing conversion of Charnockite in to hornblende biotite gneiss, the occurrences of garnet parallel to the foliation is also observed (Field photograph. 3).

Field photograph 3. Segregation of mafic and felsic layers with ptygmaticfolds.

4.3 Calc Gneiss:

Calc gneiss are characterized by alternating layer of carbonate rich and diopside rich layers are noticed in outcrop in association with garnetiferous quartzo feldspathic gneiss, is medium to coarse grained and is made up of calcite, diopside, biotite and garnet. The exposers are seen in quarry section in Nadikudi, Erichanatham, Kanjanpatti, Sundakottai, Aladipatti, Kadambankulam villages. Kanker is forming as a weathering product of calcgnessic, containing CaO content more than 30% is mined by RAMCO cements in Maravarperungudi village and in many local quarries for various purposes.

4.4 Garnetiferous Quartzofeldspathic Gneiss:

White coarse to medium grained garnetiferous quartzofeldspathic gneiss occurs as bands along the foliation in the charnockite, also as enclaves engulfed by charnockite. It consists of quartz, feldspar and garnet

with subordinate biotite. The garnets at places are rounded simulating snowball garnets, as observed in Motamalai hill (Field photograph. 4). Quartz and feldspar show stretching and alignment, imparting a crude gneissosity and garnets are unevenly distributed (Field photograph. 5). The rock is exposed in association with calc gneiss and Charnockite as observed in quarries in Pandalgudi, Duraisamipuram, Thiruthangal villages.

Field photograph 4. Snowball garnets, as observed in Motamalai hill.

Field photograph 5. Quartz and feldspar show stretching and alignment, imparting a crude gneissosity in Chinnakollapatti village.

4.5 Crystalline carbonate rock:

The rock is white, pale grey and pink in color, medium to coarse grained and consists essentially of calcite with mafic minerals (diopside) unevenly distributed within it. The crystalline limestone is associated with calc gneissic in Pandalgudi, K.Pudhur villages and it associated with Charnockite in Gopalapuram, Cholapuram villages (Field photograph. 6). At places the limestone show compositional variation to dolomitisation due to presence of mineral sapphire (Field photograph. 7) as observed in Tamilnadu Cements Corporation mining in Alangulam village. The presence of quartz vein within the limestone degrades the quality of cement grade purposes. In Cholapuram area, the remobilation of carbonate rock is noticed within the Charnockite.

Field photograph 6. Association of crystalline limestone with Charnockite in Gopalapuram.limestone quarry.

Field photograph 7. Presence of mineral sapphire (Blue color) in dolomite is observed in Gopalapuram crystalline limestone quarry.

4.6 Pink Granite:

The pink granite occurs as veins intruding into the above all litho units. It is coarse grained, consists of quartz, pink feldspar, with biotite in lesser proportion. It is associated with Charnockite is observed in Kothankulam and Aladipatti villages (Field photograph. 8).

Field photograph 8. Intrusion of pink granite within the Charnockite is observed in Kothankulam rough stone quarry.

4.7 Quartz Vein:

Quartz veins are cutting across into the litho units like charnockite, crystalline limestone, calc gneissic are observed in the field and the presence of garnet in the quartz vein are noticed in the village Kothankulam is associated with Charnockite (Field photograph. 9). The quartz vein in limestone makes unsuitable for cement grade purposes.

Field photograph 9. Presence of quartz vein in Charnockite in rough stone quarry in Nathigudi.

4.8 Limekankar

The Limekankar is found to be occurring in a vast stretch of area on the South of Aruppukottai Taluk, Virudhunagar District to Vilathikulam Taluk in Thoothukudi District. The deposits are all superficial, limited to depth of 1 to 2 meters. The Limekankar in this region is generally overlained by Clay. Limekankar is widely used for manufacturing burned lime and also being used for Cement Manufacturing. Limekankar deposit around Maravarperungudi village is currently being mined by Tvl. The Ramco Cements Limited, which is having around 38% CaO content. The estimated limekankar reserves of about 8 lacs tons for the average lime kankar thickness of 1.5 m. Potential deposits of Limekankar is also occurring in Kallurani, Muthuramalingapuram, Narttampatti, Sudhamadam, Vadakkunatham, Sallukuvarpatti, Velayuthapuram and T.Koppuchittampatti Villages of Aruppukottai Taluk. The average thickness of Limekankar deposit in these regions is 1.0 meters and the estimated Resources for ROM Kankar (Kankar plus intercalated clay) for each Square Kilometer is about 2 million Tonnes.

Field photograph 10. Limekankar overlained by Clay in Maravarperungudi Village of Aruppukottai Taluk.

4.9 Soil:

The area is mostly covered by black soil for 0 – 6m thickness, at places reddish in color where laterite formation are prominent as observed in gravel quarry in Kariapatti village. Moreover the black and red soil formations in the District are being quarried for manufacture of bricks and few good quality of black soil is using in cement industries (Field photograph. 11).

Field photograph 11.2 to 3m thick black soil over calcgnessic rock in Seeniyapuram village.

4.10 Clay (Others)

A fine to silty clayey nature black soil (commonly known as black cotton soil) occurrence is identified in various parts of the District. The Clay layer is of 0 – 5m thickness and generally underlined by Limekankar or basement gneissic formation. This Clay deposit in the form of black cotton soil has a vide spread occurrence in the District. The clay is rich in Alumina and occurring in Kallurani, Muthuramalingapuram, Narttampatti, Sudhamadam, Vadakkunatham&T.Koppuchittampatti Villages of Aruppukottai Taluk.

6. LAND UTILISATION PATTERN IN THE DISTRICT: FOREST, AGRICULTURAL, HORTICULTURAL, MINING ETC.;

The land areas of Virudhunagar District are classified in to forest (Evergreen, Deciduos, Scrub, Swamp etc.,), agricultural land (crop, plantation and fallow), wet land (River, lake, Dam etc.,), buildup land (urban, rural and mining) and barren land. The forest lands are confined to the North-Western part of the District and the major part of the land is used for agricultural purpose. Vaippar, Gundar and Arjuna rivers are contributing to wet land classification. The land use statistics with reference to Virudhunagar District are furnished below.

The land use and land cover map of Virudhunagar District, source from http://Bhuvan.nrsc.gov.in/gis/thematic/index.php is shown in (Plate No: 2).

Sl.No	Land Classification	Area in Ha	Percentage
1.	Forest	26466	6.24
2.	Uncultivable waste	4525	1.07
3.	Land put to Non- Agricultural use	70286	16.56
4.	Cultivable waste	9663	2.28
5.	Permanent pastures / grazing lands	864	0.19
6.	Land under miscellaneous tree crops	6568	1.55
7.	Current fallow	3063	0.72
8.	Other fallow	160066	37.72
9.	Net area zone	142882	33.67
10.	Area sown more than once	5961	1.40
11.	Gross cropped area	148843	35.08
12.	Geographical areas	424323	100.00

9. DETAILS OF THE MINING LEASES IN THE DISTRICT AS PER THE FOLLOWING FORMAT

Sl. No.	Name of the Lessee	Name of the Mineral	Taluk and Village	S.F.No. and extent in hects	Mining lease Granted Order No/ Proceedings / G.O	Period of Mining Lease	Date of Commencement of Mining Operation	Status (Working/Non-Working/ Temp Working	Captive / Non-Captive	Obtained Environmental Clearance (Yes/No), if yes Letter No with date of grant of EC	Location of the Mining / Quarrying lease		Method of Mining (Opencast / Underground)
1	Tvl. K.N.R. Constructions, 5-253, Linda Garden, Nethaji Nagar, Manamadurai, Sivagangai District.	Gravel	Tiruchuli Kalathur	183/2 185/5A 185/5B 185/4 **2.35.00**	KV3/17780/2016 dated: 16.11.2016	18.11.2016 to 17.05.2019 (2 1/2 years)	18.11.2016	Working	---	Yes	09°44'30.03" N to 09°44'40.93" N	78°12'44.34" E to 78°12'48.93" E	Open cast
2	Thiru.P.Servaran, S/o.Periassamy, 151/40, Manikandan Nagar, Villapuram, Madurai District	Gravel	Tiruchuli Kalathur	232/1 232/2A1 232/2A2 A **2.83.5**	KV3/28155/2016 dated: 08.11.2017	15.11.2017 to 14.11.2020	15.11.2017	Working	---	Yes	09°45'28.90 N to 09°45'36.67" N	78°11'47.23 E to 78°11'54.01" E	Open cast
3	Thiru. C. Saravanakumar, S/o. Shri. A. Chelladurai, No: 4/871, Ganesh Colony 5th Street, Ayravathanallur Village, Madurai District.	Gravel	Tiruchuli Mustakurichi	235 **8.13.5**	KV3/23980/2016 , dated: 14.11.2016	16.11.2016 to 15.11.2019	16.11.2016	Working	---	Yes	09°45'06.47 N to 09°45'19.04" N	78°09'21.71 E to 78°09'32.76" E	Open cast

4	Thiru. P. Sivabalan, S/o. Shri. K. Ponnusamy, D.No: 146, Therkveli Street, Madurai District.	Gravel	Tiruchuli Melakallangulam	72/3(P) 72/4 82/2(P) **3.61.0**	KV3/29563/2016, dated: 13.10.2017	24.10.2017 to 23.10.2020	24.10.2017	Working	---	Yes	09°43'49.09 to 09°43'58.65" N	78°10'39.17 to 78°10'45.77" E	Open cast
5	K. Palaniappan, S/o. Shri. Krishnasamy, D.No: 2/63, Inam Reddiyapatti Village, Virudhunagar District.	Gravel	Virudhunagar Kasireddiyapatti	149/2 150/4 **1.46.5**	KV3/25301/2016, dated: 09.10.2017	19.10.2017 to 18.10.2020	19.10.2017	Working	---	Yes	09°30'26" to 09°30'32.9 N	77°55'29" to 77°55'33.8" E	Open cast
6	Thiru. K. Subash Chandra Bose, S/o. Shri. Kandasamy, No: 1/44, Sakkammalpuram Sivakasi,Virudhunagar District	Gravel	Vembakottai Appaiyanayaickan patti	1031 1.41.0	KV3/25361/2016, dated: 16.10.2017.	16.11.2017 to 15.11.2020	16.11.2017	Working	---	Yes	09°17'34" to 09°17'40.4 N	77°38'14" to 77°38'22.2" E	Open cast
7	Tmt. N. Vijayalakshmi, W/o. Shri. Natarajan, No: 43, Mallipudhur, Srivilliputhur Taluk, Virudhunagar.	Gravel	Vembakottai Vendurayapuram	271/2A1B **1.52.14**	KV3/6028/2016, dated: 13.10.2017	13.11.2017 to 12.11.2020	13.11.2017	Working	---	Yes	09°27'31" to 09°27'34.5" N	77°42'28" to 77°42'36"E	Open cast
8	Thiru.M.Villadevan S/o.Muthudevar 5/33A, South Street, A.Soorakkulam Pillarkulam Union	**Gravel**	Salvarpatti	231/9 231/13 237/10 1.53.5	KV3/807/ 2017 dated: 25.07.2018	09.08.2018 to 08.08.2019	09.8.2018	Working	---	Yes	9°44'13.32" to 9°44'6.93" N	78°11'48.84" to 78°11'35.88" E	Open cast
9	Thiru.N.Ramasamy S/o, Narayana samy 3/9, Pernayakkanpatti Chindhurajapuram Post Sivakasi	**Gravel**	Sivakasi Salvarpatti	909/1 909/2 910, 911 4.04.0	KV3/499/ 2017, dated: 05.05.2018	19.05.2018 to 18.05.2021	19.05.2018	Working	---	Yes	09°20'19.5"N to 09°20'26.4" N	77°49'15.1" E to 77°49'22.7" E	Open cast

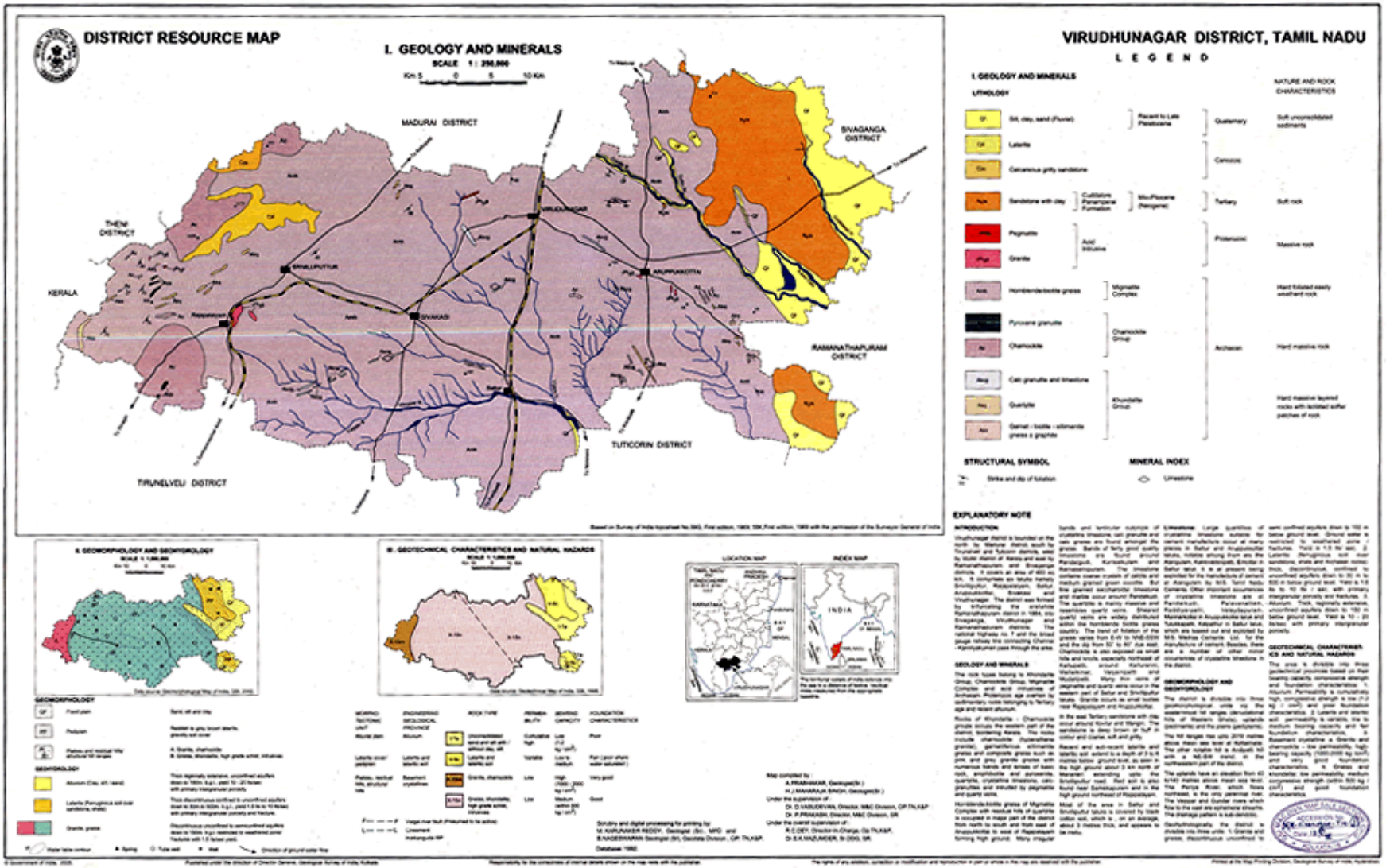
10. DETAILS OF ROYALTY OR REVENUE RECEIVED IN LAST THREE YEARS

Year	Revenue Realised (in Lakhs Rs)	Royalty (in Lakhs Rs)
2016-17	3777.29	992.58
2017-18	3434.82	636.74
2018-19	2953.32	236.52

11. DETAILS OF PRODUCTION OF MINOR MINERALS IN LAST THREE YEARS

Year	Minor mineral in Cub.m (Gravel)
2016-17	**436440.46**
2017-18	**414812.20**
2018-19	**556928.75**

12. MINERAL MAP OF THE DISTRICT



13 LIST OF LETTER OF INTENT (LOI) HOLDERS FOR GRAVEL IN THE DISTRICT ALONG WITH ITS VALIDITY AS PER THE FOLLOWING FORMAT

NIL

14. TOTAL MINERAL RESERVE AVAILABLE IN THE DISTRICT

NIL

15. QUALITY /GRADE OF MINERAL AVAILABLE IN THE DISTRICT

NIL

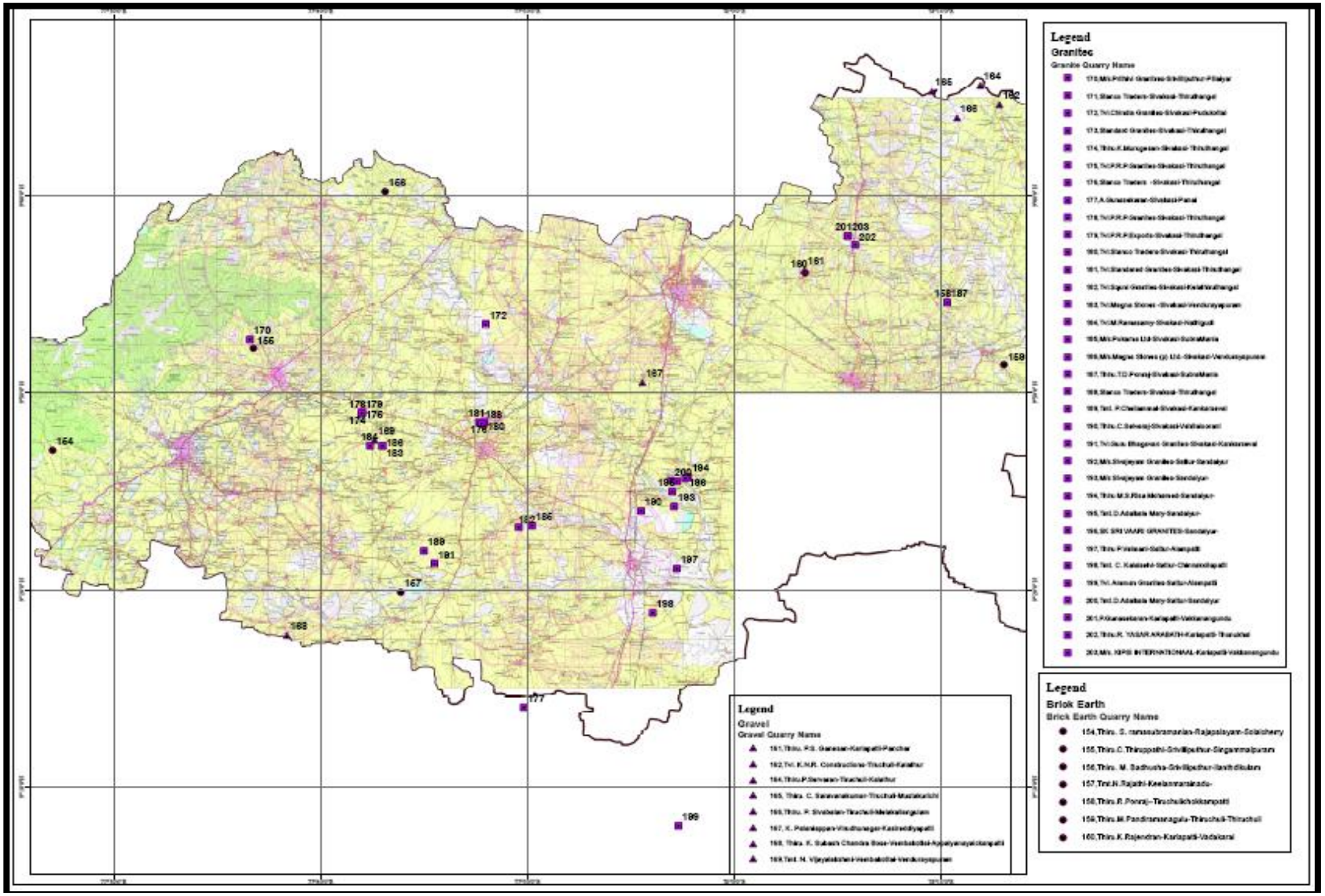
16. USE OF MINERAL

Gravel is used for road construction, for mixing with asphalt, as construction fill, and in the production of construction materials like concrete blocks, bricks, and pipes. It is also used to make roofing shingles, used on icy roads in the winter, for railroad ballast, and water filtration.

17. DEMAND AND SUPPLY OF THE MINERALS IN THE LAST THREE YEARS

Gravel			
Year	**2016-17**	**2017-18**	**2018-19**
Demand (Cbm)	**436440.46**	**414812.20**	**556928.75**
Supply (Cbm)	**436440.46**	**414812.20**	**556928.75**

18. MINING LEASES MARKED ON THE MAP OF THE DISTRICT



19. DETAILS OF THE AREA OF WHERE THERE IS A CLUSTER OF MINING LEASES VIZ. NUMBER OF MINING LEASES, LOCATION (LATITUDE AND LONGITUDE)

Sl. No	Name of the Mineral	Letter / Order No. & Date	Name of the lease	Area of mining lease to be allotted (Ha)	Village	Taluk	District	Location of mining lease (Latitude & Longitude)
1	2		3	4	5	6	7	8
NIL								

23. RECLAMATION OF MINED OUT AREA (BEST PRACTICE ALREADYIMPLEMENTED IN THE DISTRICT, REQUIREMENT AS PER RULES AND REGULATION, PROPOSED RECLAMATION PLAN)

The Gravel quarry operation restricted upto a depth of 2m, after removing the earth there is no proposal for backfilling or reclamation. The land will be levelled and used for agriculture purpose and fencing around the lease hold area.

26. PLANTATION AND GREEN BELT DEVELOPMENT IN RESPECT OF LEASES ALREADY GRANTED IN THE DISTRICT

It is necessary to develop Green Belt in and around the polluted site with suitable species to reduce the air pollution effectively. Implementation of afforestation program is of paramount importance. In addition to augmenting existing vegetation, it also checks soil erosion, make the ecosystem more complex and functionally more stable and make the climate more conductive.

Mineral deposits being shallow and deep in depth, mining and simultaneous backfilling method is being followed in most of the mining areas. The plantation is proposed and is being carried out in the safety barrier areas and also in the minedout and backfilled areas. Plantation is propsoed in minimum 20% of the total lease area for Gravel..

Stabilisation and Vegetation of Dumps

The material to be dumped shall be very hard in natue and it does not require any grading separatel. The materials like granite rejects shall be graded auomatically during dumping by Excavato and tipper combinations. Part of top soil will be spread over the Non-active dumps along the slope and edges to plant tree saplings to form vegetal cover over the dumps. Such vegetal cover will prevent erosion of dumps during rainy seasons.

27. ANY OTHER INFORMATION

NIL

Deputy Director
Geology and Mining,
Virudhunagar

District Collector
Virudhunagar