

STATE REVIEWS



Indian Minerals Yearbook 2017

(Part- I)

56th Edition

**STATE REVIEWS
(Tamil Nadu)**

(FINAL RELEASE)

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MINISTRY OF MINES
INDIAN BUREAU OF MINES**

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TAMIL NADU

Mineral Resources

Tamil Nadu is the leading holder of country's resources of vermiculite, molybdenum, dunite, rutile, garnet, and ilmenite. The State accounts for the country's 79% vermiculite, 65% dunite, 48% garnet, 52% molybdenum, 25% sillimanite and 16% fire clay resources. As per AMD of the Department of Atomic Energy, Tamil Nadu accounted for 167.70 million tonnes of Ilmenite resources and 7.85 million tonnes of Rutile resources.

Important minerals that are found to occur in the State are: **bauxite** in Dindigul, Namakkal, Nilgiris & Salem districts; **dunite/pyroxenite** in Salem district; **felspar** in Coimbatore, Dindigul, Erode, Kanchipuram, Karur, Namakkal, Salem & Tiruchirapalli districts; **fireclay** in Cuddalore, Kanchipuram, Perambalur, Pudukottai, Sivaganga, Thiruvallur, Tiruchirapalli, Vellore & Villupuram districts; **garnet** in Ramanathapuram, Tiruchirapalli, Tiruvarur, Kanyakumari, Thanjavur & Tirunelveli districts; **granite** in Dharmapuri, Erode, Kanchipuram, Madurai, Salem, Thiruvannamalai, Tiruchirapalli, Tirunelveli, Vellore & Villupuram districts; **graphite** in Madurai, Ramnathapuram, Sivaganga & Vellore districts; and **gypsum** in Coimbatore, Perambalur, Ramnathapuram, Tiruchirapalli, Tirunelveli, Thoothukudi & Virudhunagar districts. Similarly, occurrences of minerals, such as, **lignite** deposits are located in Cuddalore, Ariyalur, Thanjavur, Thiruvarur, Nagapattinam, Ramnad, Shivganga & Ramanathapuram districts; **limestone** in Coimbatore, Cuddalore, Dindigul, Kanchipuram, Karur, Madurai, Nagapattinam, Namakkal, Perambalur, Ramnathapuram, Salem, Thiruvallur, Tiruchirapalli, Tirunelveli, Vellore, Villupuram & Virudhunagar districts; **magnesite** in Coimbatore, Dharmapuri, Karur, Namakkal, Nilgiri, Salem,

Tiruchirapalli, Tirunelveli & Vellore districts; **quartz/silica sand** in Chennai, Coimbatore, Cuddalore, Dharmapuri, Dindigul, Erode, Kanchipuram, Karur, Madurai, Namakkal, Periyar, Perambalur, Salem, Thiruvallur, Thiruvarur, Nagapattinam, Tiruchirapalli, Villupuram, Virudhunagar & Vellore districts; **talc/steatite/soapstone** in Coimbatore, Salem, Tiruchirapalli & Vellore districts; **titanium minerals** in Kanyakumari, Nagapattinam, Ramanathapuram, Thiruvallur, Tirunelveli & Thoothukudi districts; **vermiculite** in Dharmapuri, Tiruchirapalli & Vellore districts; and **zircon** in Kanyakumari district have been established.

Other minerals that occur in the State are: **apatite** in Dharmapuri & Vellore districts; **barytes** in Erode, Madurai, Perambalur, Tirunelveli & Vellore districts; **bentonite** in Chengai-Anna district; **calcite** in Salem district; **china clay** in Cuddalore, Dharmapuri, Kanchipuram, Nilgiris, Sivaganga, Thiruvallur, Tiruvannamalai, Tiruchirapalli & Villupuram districts; **chromite** in Coimbatore & Salem districts; **copper, lead-zinc** and **silver** in Villupuram district; **corundum** and **gold** in Dharmapuri district; **dolomite** in Salem & Tirunelveli districts; **emerald** in Coimbatore district; **iron ore (magnetite)** in Dharmapuri, Erode, Nilgiris, Salem, Thiruvannamalai, Tiruchirapalli & Villupuram districts; **kyanite** in Kanyakumari & Tirunelveli districts; **molybdenum** in Dharmapuri, Dindigul & Vellore districts; **pyrite** in Vellore district; **sillimanite** in Kanyakumari, Karur & Tirunelveli districts; **tungsten** in Madurai & Dindigul districts; and **wollastonite** in Dharmapuri & Tirunelveli districts (Table-1). District-wise reserves/resources of lignite are provided in Table-2.

In addition to the above, Petroleum and natural gas deposits are found to be located in Cauvery basin area.

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Table – 1 : Reserves/Resources of Minerals as on 1.4.2015: Tamil Nadu

| Mineral | Unit | Reserves | | | | | Remaining Resources | | | | | Total resources (A+B) | |
|--------------|-----------------|-------------------|----------|---------|--------------|-----------------------|---------------------------|--------------------|---------------------|--------------------|--------------------------|-----------------------|--------------|
| | | Proved STD 111 | Probable | | Total (A) | Feasibility STD211 | Pre-feasibility STD221 | Measured STD331 | Indicated STD332 | Inferred STD333 | Reconnaissance STD334 | | Total (B) |
| | | | STD121 | STD122 | | | | | | | | | |
| Apatite | tonne | - | - | - | - | - | - | - | 240000 | - | 240000 | 240000 | |
| Barytes | tonne | - | - | - | - | - | - | 500 | 221919 | - | 222419 | 222419 | |
| Bauxite | '000 tonnes | 379 | - | 379 | - | 1141 | 960 | 10084 | 8363 | - | 24112 | 24491 | |
| Bentonite# | tonne | - | - | - | - | - | - | 3725333 | 5818519 | - | 9543852 | 9543852 | |
| Calcite# | tonne | - | - | - | - | - | - | - | 116632 | - | 116632 | 116632 | |
| China clay# | '000 tonnes | - | - | - | - | - | - | 327 | 56570 | - | 56897 | 56897 | |
| Chromite | '000 tonnes | - | - | - | - | - | 7 | - | 276 | - | 282 | 282 | |
| Copper | | | | | | | | | | | | | |
| Ore | '000 tonnes | - | - | - | - | - | 200 | 590 | - | - | 790 | 790 | |
| Metal | '000 tonnes | - | - | - | - | - | 1.08 | 2.73 | - | - | 3.81 | 3.81 | |
| Corundum | tonne | - | - | - | - | - | - | - | 4000 | - | 4000 | 4000 | |
| Dolomite# | '000 tonnes | - | - | - | - | - | 2010 | 135 | - | - | 2145 | 2145 | |
| Dunite# | '000 tonnes | 7343 | 1450 | 8793 | - | - | - | - | 5773 | 5044 | 113007 | 121800 | |
| Felspar# | tonne | 738656 | 7134 | 769176 | 1896213 | 620530 | 18870 | 69822 | 5465465 | - | 9172741 | 9941916 | |
| Fireclay# | '000 tonnes | 2523 | 458 | 155 | 3952 | 3971 | 1561 | - | 102202 | - | 113528 | 116663 | |
| Garnet | tonne | 225554 | 238067 | 1382194 | 1845815 | 21936 | 1342191 | 15000 | 1425996 | - | 25072194 | 26918009 | |
| Gold | | | | | | | | | | | | | |
| Ore | (Primary) tonne | - | - | - | - | - | - | - | 67000 | - | 67000 | 67000 | |
| Metal | | | | | | | | | | | | | |
| (Primary) | tonne | - | - | - | - | - | - | - | 1.00 | - | 1.00 | 1.00 | |
| Granite# | | | | | | | | | | | | | |
| (Dim. Stone) | '000 cum | - | 1448 | 238 | 1686 | - | 45690 | 7 | 503818 | - | 557749 | 559435 | |
| Graphite | tonne | 2495188 | - | 810450 | 3305638 | 28708 | 39486 | 29136 | 647500 | - | 4613707 | 7919345 | |
| Gypsum# | '000 tonnes | 137 | - | 46 | 183 | 19 | 469 | 25 | 249 | 10 | 27099 | 27282 | |
| Iron ore | | | | | | | | | | | | | |
| (Magnetite) | '000 tonnes | - | - | - | - | - | - | - | 169388 | 110728 | 226921 | 507037 | |
| Kyanite | tonne | - | - | - | - | - | - | - | 167000 | 81359 | - | 248359 | |
| Lead-Zinc | | | | | | | | | | | | | |
| Ore | '000 tonnes | - | - | - | - | - | 200 | 590 | - | - | 790 | 790 | |
| Lead metal | '000 tonnes | - | - | - | - | - | 2.26 | 5.48 | - | - | 7.74 | 7.74 | |
| Zinc metal | '000 tonnes | - | - | - | - | - | 11.76 | 24.76 | - | - | 36.52 | 36.52 | |
| Limestone | '000 tonnes | 334445 | 82892 | 56572 | 473909 | 209632 | 91350 | 92843 | 33440 | - | 1126088 | 1599997 | |
| Magnesite | '000 tonnes | 73499 | 40 | 38 | 73577 | 499 | 6224 | 17 | 737 | - | 24649 | 98226 | |

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Table -1(Concl.d.)

| Mineral | Unit | Reserves | | | | | Remaining Resources | | | | | Total resources (A+B) | | |
|--|-------------|-------------------|----------|--------|--------------|-----------------------|---------------------|--------|--------------------|---------------------|--------------------|-----------------------|--------------------------|--------------|
| | | Proved STD 111 | Probable | | Total (A) | Feasibility STD211 | Pre-feasibility | | Measured STD331 | Indicated STD332 | Inferred STD333 | | Reconnaissance STD334 | Total (B) |
| | | | STD121 | STD122 | | | STD221 | STD222 | | | | | | |
| Molybdenum | | | | | | | | | | | | | | |
| Ore | tonne | - | - | - | - | 1500000 | - | 36000 | 569304 | 7777694 | 167800 | 10050798 | 10050798 | |
| Contained | | | | | | | | | | | | | | |
| MoS ₂ | tonne | - | - | - | - | 1050 | - | 83 | 287 | 4459.33 | 50.34 | 5929.67 | 5929.67 | |
| Pyrite | '000 tonnes | - | - | - | - | - | - | - | - | 24 | - | 24 | 24 | |
| Quartz- | | | | | | | | | | | | | | |
| Silica sand [#] | '000 tonnes | 25086 | 3493 | 1199 | 29778 | 15176 | 28196 | 3387 | 95837 | 26931 | - | 171718 | 201496 | |
| Silver | | | | | | | | | | | | | | |
| Ore | tonne | - | - | - | - | - | - | - | 330000 | 460000 | - | 790000 | 790000 | |
| Metal | tonne | - | - | - | - | - | - | - | 15.87 | 26.68 | - | 42.55 | 42.55 | |
| Sillimanite | tonne | 140184 | - | - | 140184 | 4000 | 4246 | - | - | 3612154 | - | 17320381 | 17460565 | |
| Talc/steatite/ soapstone [#] | '000 tonnes | - | - | - | - | 210 | 559 | 27 | - | 553 | - | 3110 | 3110 | |
| Tungsten | | | | | | | | | | | | | | |
| Ore | tonne | - | - | - | - | - | - | - | - | - | 250000 | 250000 | 250000 | |
| Contained | | | | | | | | | | | | | | |
| WO ₃ | tonne | - | - | - | - | - | - | - | - | - | 50 | 50 | 50 | |
| Vermiculite | tonne | 1522014 | - | - | 1522014 | - | - | - | - | 343051 | - | 343051 | 1865065 | |
| Wollastonite | tonne | - | - | - | - | - | - | - | - | 3533 | - | 3533 | 3533 | |

Figures rounded off

Note: The proved and indicated balance recoverable reserves of crude oil and natural gas in the State as on 1.4.2016 are 10.80 million tonnes and 47.59 billion cu m, respectively.

Declared as Minor Minerals vide Gazette Notification dated 10.02.2015

Minor Minerals before Gazette Notification dated 10.02.2015

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Table – 2 : Reserves/Resources of Lignite as on 1.4.2017 : Tamil Nadu

(In million tonnes)

| District | Proved | Indicated | Inferred | Total |
|---------------------------|----------------|-----------------|----------------|-----------------|
| Total | 4093.53 | 22632.87 | 9055.98 | 35782.38 |
| Cuddalore | 3189.30 | 2094.78 | 1302.23 | 6586.31 |
| Ariyalur | 904.23 | 302.50 | 481.07 | 1687.80 |
| Thanjavur | - | 2290.71 | 72.66 | 2363.37 |
| Thanjavur & Thiruvarur | - | 17248.06 | 3123.46 | 20371.52 |
| Thanjavur & Nagapattinam | - | 359.71 | 926.62 | 1286.10 |
| Thiruvarur & Nagapattinam | - | - | 574.05 | 574.05 |
| Ramanathapuram | - | 168.83 | 1590.68 | 1759.51 |
| Ramnad | - | - | 964.97 | 964.97 |
| Ramnad & Sivaganga | - | - | 20.24 | 20.24 |

*Source: Coal Directory of India, 2016-17.***Exploration & Development**

The details of exploration activities conducted by GSI & various agencies for lignite and other minerals during 2016-17 are furnished in Table - 3.

During 2016-17, National Oil Companies (NOC) continued their seismic survey and acquired seismic data in the state.

Production

The principal minerals produced in the state were lignite, natural gas (utilised), limestone, petroleum (crude), magnesite, garnet (abrasive), graphite (r.o.m.), bauxite and vermiculite in 2016-17.

The value of minor minerals' production was estimated at ` 409 crore for the year 2016-17.

The number of reporting mines was 236 in 2016-17 in case of MCDR minerals. (Table-4)

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Table –3 : Details of Exploration Activities in Tamil Nadu, 2016-17

| Agency/ Mineral/ District | Location | Mapping | | Drilling | | Sampling (No.) | Remarks Reserves/Resources estimated |
|---------------------------------|---|---------|-----------------|---------------------|----------|-------------------|---|
| | | Scale | Area (sq km) | No. of boreholes | Meterage | | |
| GSI | | | | | | | |
| Gold | | | | | | | |
| Krishnagiri | Maharaja gadai Bargur block | - | - | - | - | - | G4 reconnaissance survey for gold was taken up between Maharaja gadai Bargur block. Analytical results show low value of Au except for samples collected from one trench which have given comparatively high values of Au where its concentration reached up to 509 ppb over 0.80 m. The concentration of Cu (in BIF, amphibolites & quartz vein) ranges from 6 to 465 ppm whereas the maximum concentration recorded for Zn is 240 ppb. During SEM studies, two grains of gold 0.5 pm size were identified in one amphibolites sample. |
| Lignite | | | | | | | |
| Ramananthapuram | Kalari North Sector, Ramanad sub-basin | - | 27.0 | 11 | 5,020.55 | - | G3 stage preliminary exploration for Lignite was carried out in this area. The explored area is located to the south of Bogalur East Sector and east of Tiyanur Sector in the East Coast Lignite Field, Tamil Nadu, which is central part of Ramnad Sub-Basin located in the southern part of the Cauvery Basin. The investigation was initiated during field season 2015-2016 and continued up to 2016-2017. Geophysical logging was carried out in nine boreholes. Single regionally persistent lignite seam which splits into three major seams (namely IA, IB & IC) of the previously explored Tiyanur Sector and Bogalur East Sector has been established. Cumulative thickness of lignite seams in boreholes drilled varies from 3.20 to 15.00 m and intersected in a depth range of 371.00 to 463.40 m with partings of cumulative thickness ranging between 3.00 and 25.50 m. Lignite extend over a strike distance of about 7 km and about 6 km along dip direction in the Kalari North Sector. The quality of lignite in Ramnad sub-basin is comparable to the overall lignite quality of the Neyveli and Mannargudi Lignite fields. The average moisture content of the lignite is assumed as 45%. Analytical result of 60 samples generated from nine boreholes has been received. The weighted recalculated ash content band |

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Table - 3 (Contd.)

| Agency/ Mineral/ District | Location | Mapping | | Drilling | | Sampling (No.) | Remarks Reserves/Resources estimated |
|--|-----------------------------|---------|-----------------|---------------------|----------|-------------------|---|
| | | Scale | Area (sq km) | No. of boreholes | Meterage | | |
| | | | | | | | by band lignite samples varies from 3.62 to 22.84%. The weighted recalculated volatile matter varies between 20.99 and 35.14% and fixed carbon content varies between 11.17 and 23.48%. The weighted recalculated calorific value ranges from 1470.61 K. Cal/Kg to 3543.30 K. Cal/Kg and about 50 % of band-by-band samples analysed show a calorific value of more than 3000 K. Cal/Kg. A total of 221.90 million tonnes of "Inferred" category of lignite has been estimated over an area of 23.194 sq km which includes 80.63 million tonnes of lignite 'A' grade and 141.27 million tonnes of lignite 'B' grade established in Kalari North Sector between a depth range of 371.00 to 463.40 m. |
| Sulphide (Basemetal) | | | | | | | |
| Dindigul & Karur | Idaiyakottai zone | 1:12500 | 100 | - | - | 19 | Large-scale geological mapping has been carried out in and around Idaiyakottai. The chemical analytical results so far received have not indicated significant base metal mineralisation zones. However the Cu values range between 0.10% and 0.52% for 19 samples collected from Devanayakkanur and also the following spotted values are observed a) 1.5 km north of Kannimarpalayam – 0.14% of Cu, b) 0.5 km SW of Pappanayakkanpatti – 0.88% of Cu & c) 1.5 km SW of Pappanayakkanpatti – 4.86% of Cu. |
| Iron ore | | | | | | | |
| Namagiripettai & Tammampatti, Namakkal & Salem | Pachchudaiyanpalaiyam block | 1:12500 | 100 | - | - | 406 | G4 stage reconnaissance survey for iron ore was taken up in the BMQ between Namagiripettai and Tammampatti, Namakkal and Salem has been carried out by geological mapping & sampling. A total of 406 nos. of BRS was collected from BMQ bands for iron ore analysis and 10 limonitised/oxidized samples for gold analysis. In Pachchudaiyanpalaiyam block, 3 BMQ bands have been delineated. Band I has a cumulative strike length of 4.65 km with an average outcrop width of 8 m. The Fe value ranges from 10.40 to 43.74% (avg. 31.73% Fe). Band II has a |

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Table - 3 (Contd.)

| Agency/ Mineral/ District | Location | Mapping | | Drilling | | Sampling (No.) | Remarks Reserves/Resources estimated |
|---|----------------------|---------|-----------------|---------------------|----------|-------------------|--|
| | | Scale | Area (sq km) | No. of boreholes | Meterage | | |
| | | | | | | | cumulative strike length of 4.25 km with an average outcrop width of 6 m. The Fe value ranges from 15.72 to 40.29% (avg. 29.77% Fe). Band III has a strike length of 1.7 km with an average outcrop width of 6.4 m. and Fe value ranges from 21.77 to 33.06% (avg. 28.77% Fe). Band IV is a minor band. |
| Namagiripettai and Tamma- mpatti, Namak- kal and Salem | Kariampatti block | - | - | - | - | - | In this block, 4 major BMQ bands were delineated. Band I has a cumulative strike length of 1.1 km with an average outcrop width of 0.95 m. The Fe ranges from 19.58 to 20.17% (avg. 19.87% Fe). Band II extends up to a strike length of 3 km with average outcrop width of 1.8 m and the Fe value range from 7.16 to 35.22% (avg. 15.15% Fe). Band III has a strike length of 3.7 km with an average outcrop width of 2.5 m approx.. The Fe ranges from 8.33 to 33.24% (avg. 19.81% Fe) and band IV has the longest cumulative strike length of 7.17 km with an average outcrop width of 5.9 m. The Fe value ranges from 5.11 to 39.12% (avg. 22.96% Fe). Nine minor bands were also reported in this block. |
| | Ulipuram block | - | - | - | - | - | In this block, two major BMQ bands were delineated. Band I has a cumulative strike length of 3.1 km with an average outcrop width of 7.8 m. The Fe ranges from 13.81 to 37.57% (avg. 21.99% Fe). Band II has a strike length of 1.55 km with an average outcrop width of 8.25 m. The Fe ranges from 12.41 to 38.99% (avg. 27.96% Fe). Two minor bands have also been identified measuring 1 km and 0.25 km in strike length. Ore resources were estimated for all the 3 blocks. The iron ore available in this area ranges from 9.13 to 39.78% FE. Hence, two cut-off grades were considered for resource estimation i.e. 10-25% Fe & 25 – 40% Fe. The total iron ore resources of both grades in Pachchudaiyanpalaiyam block is estimated at 7.391 million tonnes; in Kariyampatti block, it is 7.296 million tonnes and in Ulipuram block, |

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Table - 3 (Contd.)

| Agency/ Mineral/ District | Location | Mapping | | Drilling | | Sampling (No.) | Remarks Reserves/Resources estimated |
|--|-------------------------------|----------|-----------------|---------------------|----------|-------------------|---|
| | | Scale | Area (sq km) | No. of boreholes | Meterage | | |
| <p>it is 4.779 million tonnes. Hence, total resources of low grade iron ore in the area is 19.466 million tonnes with an average of 26.25% Fe content over an average width of 6.36 m.</p> | | | | | | | |
| MECL | | | | | | | |
| Molybdenum | | | | | | | |
| Dharampurii | Mannadipatti Central block | 1:1000 | 0.60 | 7 | 1221.00 | 528 | G3 level exploration for molybdenum was carried out in this block. The Mannadipatti Central Block lies between Mannadipatti North and Mannadipatti South Block in Uttangari sub areas of Harur-Uttangari Belt extending over a strike length of 700 m and is having an area of 0.60 sqkm. Total 528 samples were collected for analysis of various minerals like Mo, Pb, Cu, W, Sn, Ta, Nv, Co. Au, Re, etc.Total resources estimated at 0.699 million tonnes with 0.031% molybdenum at 0.010% Mo cut-off. The resources include previous estimation made by different agencies in the area. |
| Platinum | | | | | | | |
| Dharampurii | Mannadipatti Central block | 1:12.500 | 175 | - | - | - | G4 reconnaissance survey for Platinum Group of Elements in Samalpatti Complex has been carried out by large-scale mapping. Overall, the area reveals Pt values ranging from 5 to 170 ppb (Average of 12.77 ppb) and Pd values ranging from 5 to 284 ppb (Average of 11.83 ppb). The entire Samalpatti area shows average Pt + Pd values from 10 to 454 ppb (Average of 24.60 ppb). |
| Gold | | | | | | | |
| Dharampurii | Kempinkote block | 1:1000 | 0.43 | 10 | 3363.00 | 292 | MECL carried out exploration for gold ore in this block by mapping, drilling, sampling and chemical analysis of 1639 nos of primary & check drill core samples for gold, 110 nos primary samples for As, Cu, W, Ni, Co & Mo; 55 nos of composite samples for Au & Ag; 40 nos samples for each petrological & mineragraphic studie; 16 nos for XRD studies; 21 nos samples for spectrographic studies and 50 nos for specific studies determination. Estimated 1.385 million tonnes of gold ore with 2.70 g/t Au at 0.50 g/t Au cut-off under UNFC measured (331) category. This includes all previous estimations made by different exploration agencies. |

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Table - 3 (Concl.)

| Agency/ Mineral/ District | Location | Mapping | | Drilling | | Sampling (No.) | Remarks Reserves/Resources estimated |
|---------------------------------|------------------------|---------|-----------------|---------------------|----------|-------------------|---|
| | | Scale | Area (sq km) | No. of boreholes | Meterage | | |
| Limestone | | | | | | | |
| Cuddalore | Uchchimedu prospect | - | 40 | 15 | 975 | 487 | G3 exploration for limestone in the Vriddhachalam sub-basin was carried out to assess the limestone resource in Uchchimedu prospect. A total of 15 numbers of vertical boreholes (65m depth) was drilled at 500m spacing to ascertain the extension of limestone zones along and across the strike. The calcareous zone was intersected in all the boreholes. The overburden varies from 9.5 m in the north to 40.13m in the south along the main base line. A total of 26 numbers trench samples was collected from 3 trenches and the analytical data shows that the CaO% of limestone ranges from 36.14 to 43.41%. The thickness of the calcareous zone ranges from 25.00 to 45.00m and it is comparatively lesser in thickness along up dip direction. Out of 487 core samples, analytical results for 325 samples show that an average grade of CaO wt% varies from 40.38 to 45.18% for limestone zones. Overall, the entire calcareous zone analysed for 38.85% for 36.12 m thickness, indicating the marginal grade limestone. The thickest limestone intersected in boreholes is 34.70 m and 37.57 m with an average grade of CaO of 42.35% and 43.28%, respectively. Resource will be estimated after receiving the analytical results for all the core samples. |

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**Table – 4 : Mineral Production in Tamil Nadu, 2014-15 to 2016-17
(Excluding Atomic Minerals)**

(Value in ` '000)

| Mineral | Unit | 2014-15 | | | 2015-16 | | | 2016-17 (P) | | |
|-----------------------------|-------|--------------|--------|---------------------|--------------|--------|---------------------|--------------|--------|-----------------------|
| | | No. of mines | Qty | Value ^{\$} | No. of mines | Qty | Value ^{\$} | No. of mines | Qty | Value ^{\$\$} |
| All Minerals | | 313 | | 62274959 | 250 | | 60766798 | 236 | | 10945989 |
| Lignite | '000t | 3 | 25190 | 51122400 | 3 | 24227 | 49168000 | 3 | 26204 | - |
| Natural Gas (ut.) | m c m | - | 1192 | - | - | 1011 | - | - | 983 | - |
| Petroleum (crude) | '000t | - | 240 | - | - | 255 | - | - | 284 | - |
| Bauxite | t | 3 | 78372 | 44594 | 3 | 27146 | 19002 | 3 | 7269 | 4811 |
| Ball Clay# | t | 1 | 760 | 532 | - | - | - | - | - | - |
| Clay (others)# | t | 2 | - | - | - | - | - | - | - | - |
| Dunite | t | - | 73927 | 108310 | - | - | - | - | - | - |
| Felspar# | t | - | 51884 | 20078 | - | - | - | - | - | - |
| Fireclay# | t | 10 | 169458 | 28359 | - | - | - | - | - | - |
| Garnet (abrasive) | t | 2 | 10395 | 81663 | 2 | 10693 | 81737 | 3 | 10611 | 86229 |
| Graphite (r.o.m.) | t | 2 | 72956 | 57962 | 2 | 90825 | 73508 | 2 | 95061 | 57682 |
| Gypsum | t | 1 | - | - | - | - | - | - | - | - |
| Limestone | '000t | 209 | 22227 | 5989520 | 223 | 23008 | 6623612 | 209 | 23840 | 6087154 |
| Lime Kankar# | t | 1 | 111382 | 21089 | - | - | - | - | - | - |
| Limeshell | t | 1 | 30 | 30 | 1 | - | - | 1 | - | - |
| Magnesite | t | 13 | 225694 | 637938 | 15 | 264913 | 705318 | 14 | 223424 | 612564 |
| Marl** | t | - | 2039 | 568 | - | - | - | - | - | - |
| Quartz# | t | 58 | 21268 | 15725 | - | - | - | - | - | - |
| Silica Sand# | t | 5 | 74268 | 46933 | - | - | - | - | - | - |
| Talc/Soapstone/Steatite | t | 1 | 2750 | 825 | - | - | - | - | - | - |
| Vermiculite | t | 1 | 2222 | 4982 | 1 | 968 | 2170 | 1 | 1691 | 4098 |
| Minor Minerals [@] | | - | - | 4093451 | - | - | 4093451 | - | - | 4093451 |

Note: The number of mines excludes petroleum (crude), natural gas (utilised) and minor minerals.

^{\$} Excludes the value of Petroleum (crude) & Natural Gas (ut.) ^{\$\$} Excluding Fuel minerals.

* Associated with magnesite. ** Associated with limestone.

[@] Figures for earlier years have been repeated as estimates because of non-receipt of data.

[#] Declared as Minor Minerals before Gazettee Notification dated 10.02.2015

STATE REVIEWS

Mineral-based Industry

The present status of each mineral-based industry is not readily available. However, the important mineral-based industries in organised sector in the State are given in Table -5.

Table – 5 : Principal Mineral-based Industries in Tamil Nadu

| Industry/plant | Capacity ('000 tpy) |
|--|---------------------|
| Abrasives | |
| Carborandum Universal Ltd, Chennai. | NA |
| Cutfast Abrasives Tools Pvt. Ltd, Chennai. | NA |
| Asbestos Products | |
| Hyderabad Industries Ltd, Kannigaiper. | 100 |
| Ramco Industries Ltd, Arakkonam, Distt. Vellore | NA |
| Southern Asbestos Cement Ltd, Arrakonam. Distt. Vellore | NA |
| Tamil Nadu Asbestos, Alangulam, Distt. Virudhunagar. | 28.5 |
| Cement | |
| ACC Ltd, Madukkarai, Distt. Coimbatore. | 1180 |
| Chettinad Cement Corpn. Ltd, Puliyaar, Distt. Karur. | 1700 |
| Chettinad Cement Corpn. Ltd, Karikalli Distt. Dindigul. | 4500 |
| Chettinad Cement Corpn. Ltd, Ariyalur. | 5500 |
| Dalmia Cements, Dalmiapuram, Distt. Tiruchirapalli. | 4000 |
| Dalmia Cements, Ariyalur. | 2500 |
| India Cements Ltd, Sankarnagar, Distt. Tirunelveli. | 2050 |
| India Cements Ltd, Sankari, Distt. Salem (G). | 860 |
| India Cements Ltd, Dalavoi, Distt. Perambalur. | 1850 |
| India Cements Ltd, Vallur, Distt. Chennai (G). | 1100 |
| Ultra-Tech Cement Ltd, Reddipalayam, Distt. Ariyalur. | 1400 |
| Ultra-Tech Cement Works (ARCW), Arakkonam (G). | 1100 |
| Ramco Cement (formerly Madras Cement), R.S. Raja Nagar, Distt. Virudhunagar. | 2000 |

(Contd.)

Table - 5 (Contd.)

| Industry/plant | Capacity ('000 tpy) |
|---|---|
| Ramco Cement (formerly Madras Cement), Alathiyur Works, Distt. Ariyalur. | 3050 |
| Ramco Cement (formerly Madras Cement), Ariyalur Plant, Govindpuram, Distt. Ariyalur. | 3500 |
| Ramco Cement (formerly Madras Cement), Chengalpet Grinding Unit, Uthiramerur, Distt. Kanchipuram (G). | 600 |
| Ramco Cement (formerly Madras Cement), Valapady, Distt. Salem (G). | 1600 |
| Tamil Nadu Cements, Alangulam, Distt. Virudhunagar. | 400 |
| Tamil Nadu Cements, Ariyalur, Distt. Ariyalur. | 500 |
| Zuari Cements Ltd, Chennai Grinding Unit, Attipattu, Tiruvallur (G). | 1000 |
| Ceramics | |
| Carborandum Universal Ltd, Hosur. | NA |
| Murugappa Morgan Thermal Ceramics Ltd, Ranipet, Distt. Vellore. | 5.44 |
| Neycer India Ltd, Vadalur, Distt. Cuddalore. | 9.0 |
| Roca Bathroom Product Pvt Ltd, Ranipet, Distt. Erode. | 12.6 |
| Roca Bathroom Product Pvt Ltd, Perundurai, Distt. Vellore. | 24 |
| Spartek Ltd, Chennai. | NA |
| Copper Smelter | |
| Sterlite Industries (I) Ltd, Thoothukudi. | 400 (Cu smelting) 205 (Cu cathode) 90 (wire rods) 1050 (H ₂ SO ₄) |
| Fertilizer | |
| Coimbatore Pioneer Fertilizer Ltd, Muthugoundanpudur, Distt. Coimbatore. | 66 (SSP) 30 (H ₂ SO ₄) 3 (oleum) |
| Coramandal International Ltd, (Formerly EID Parry), Ranipet, Distt. N. Arcot. | 132 (SSP) 33 (H ₂ SO ₄) |
| Coramandal International Ltd, Ennore, Distt. Thiruvallur. | 330 (Complex) |
| Kothari Industrial Corp. Ltd, Ennore. | 66 (SSP) |
| Madras Fertilizer Ltd, Manali, Distt. Thiruvallur. | 486.8 (Urea) 840 (NP/NPKs) |
| Greenstar Fertilizers Ltd, Guindy. | 115 (SSP) |

(Contd.)

STATE REVIEWS

Table -5 (Contd.)

| Industry/plant | Capacity ('000 tpy) |
|--|--|
| Southern Petrochemical Industries Corpn. Ltd), Thoothukudi. | 620 (Urea) |
| Chemicals | |
| Tanfac Industries Ltd, Cuddalore. | 16.5 (anhydrous HF), 16.5 (AlF ₃) 67.5 (H ₂ SO ₄) 14 (Hydrofluoric acid) 3.4 (speciality fluorides) |
| Tuticorin Alkali Chemicals & Fertilizers Ltd, Thoothukudi | 115 (soda ash) 105 (A/Cl) |
| Synthetic Rutile | |
| DCW Ltd, Sahupuram, Distt. Thoothukudi. | 48 |
| TiO₂ Pigment | |
| VVTi Pigments (P) Ltd, (formerly, Kilburn Chemicals) Distt. Thoothukudi. | 13 |
| Iron & Steel | |
| Salem Steel Plant (SAIL), Salem. | 180 (Crude/ Liquid steel) |
| JSW Steel Plant (acquired Southern Iron & Steel Co. Ltd), Salem. | 1180 (sinter) 180 (pig iron) 1000 (specialised alloy steel) |
| Sponge Iron | |
| Akshara Industries Ltd, Eguvarpalayam, Distt. Thiruvallur. | 60 |
| Kaushik Steel Industries Ltd, Pappen Kuppam Distt. Thiruvallur. | 60 |
| Agni Steels Pvt Ltd, Olappalayam Road, Ingur, Distt. Erode. | 30 |
| Refractory | |
| ABREF Pvt. Ltd, Gummidipoondi, Distt. Thiruvallur. | 1.3 |

(Contd.)

Table -5 (Concl.)

| Industry/plant | Capacity ('000 tpy) |
|--|--|
| Sharda Ceramics Pvt. Ltd, Ambattur, Chennai. | 9.9 |
| Shri Natraj Ceramic & Chemical Industries Ltd, Dalmiapuram, Distt. Tiruchirapalli. | 42 |
| VRW Refractories, Vanagaram. | 21.6 |
| Zirconium Complex, Pazhakayal, Thoothukudi. | 0.5 (Zr-Oxide) 0.25 (Zr sponge) |
| DBM & Calcined Magnesite | |
| SAIL Refractory Co. Ltd (formerly Burn Standard Co. Ltd), Salem. | 18 (calcined magnesite) 54 (DBM) 48 (refractory) |
| Dalmia Magnesite Corpn., Chettichavadi Distt. Salem. | 72 (DBM) |
| Ramkrishna Magnesite Mines, Salem. | 3 (calcined) |
| Tamil Nadu Magnesite Ltd, Kurumbapatty, Distt. Salem. | 19.5 (calcined magnesite) 30 (DBM) |
| Sri Pon Kumar Magnesite Ltd, Salem. | 26.5 (DBM) |
| Silicon Carbide | |
| Carborandum Universal Ltd, Tiruvottiyur. | NA |
| Petroleum Refinery | |
| CPCL, Manali, Dist. Thiruvallur. | 10500 |
| CPCL, Narimanam. | 1000 |

(G): Grinding unit.

Note: Data, not available for fertilizer and cement Industries on respective website, is taken from Indian Fertilizer Scenario, 2015/FAI Statistics, 2015-16 and Survey of Cement Industry & Directory, 2016 respectively.