

STATE REVIEWS



Indian Minerals Yearbook 2022

(Part- I)

61st Edition

STATE REVIEWS
(Gujarat)

(ADVANCE RELEASE)

GOVERNMENT OF INDIA
MINISTRY OF MINES
INDIAN BUREAU OF MINES

Indira Bhavan, Civil Lines,
NAGPUR – 440 001

PHONE/FAX NO. (0712) 2565471
PBX : (0712) 2562649, 2560544, 2560648
E-MAIL : cme@ibm.gov.in
Website: www.ibm.gov.in

July, 2024

GUJARAT

Mineral Resources

Gujarat is the sole producer of chalk and is the principal producer of clay (others), fluorite (graded), kaolin, silica sand, lignite, petroleum & natural gas and marl in the country. The State is the sole holder of the country's chalk, marl and perlite resources and possesses 66% fluorite, 28% diatomite, 25% bentonite, 18% granite, 12% wollastonite, 10% limestone and 9% bauxite resources.

The important mineral occurrences in the State are: **bauxite** in Amreli, Bhavnagar, Jamnagar, Junagadh, Kheda, Kachchh, Porbandar, Sabarkantha & Valsad districts; **ball clay** in Banaskantha, Bharuch, Kachchh & Patan districts; **bentonite** in Amreli, Bhavnagar, Jamnagar, Kachchh & Sabarkantha districts; **china clay** in Amreli, Banaskantha, Bhavnagar, Jamnagar, Junagadh, Kachchh, Mahesana & Sabarkantha districts; **chalk** in Porbandar district; **diatomite** in Bhavnagar district; **dolomite** in Bhavnagar & Vadodara districts; **fireclay** in Bharuch, Kachchh, Mahesana, Rajkot, Sabarkantha, Surat & Surendranagar districts; **fluorite** in Vadodara & Bharuch districts; **gypsum** in Bhavnagar, Jamnagar, Junagadh, Kachchh and Surendranagar districts; **lignite** in Bharuch, Bhavnagar, Kachchh & Surat districts; **limestone** in Amreli, Banaskantha, Bharuch, Bhavnagar, Jamnagar, Junagadh, Kheda, Kachchh, Panchmahals, Porbandar, Rajkot, Sabarkantha, Surat, Vadodara & Valsad districts; **marl** in Amreli, Junagadh & Porbandar districts; **ochre** in Banaskantha, Bhavnagar & Kachchh districts; **perlite** in Rajkot district; **petroleum and natural gas** in oil fields of

Ankaleshwar, Kalol, Navgam, Balol & Cambay in Cambay onshore and offshore basins; **quartz/silica sand** in Bharuch, Bhavnagar, Dahod, Kheda, Kachchh, Panchmahals, Rajkot, Sabarkantha, Surat, Surendranagar, Vadodara & Valsad districts; and **talc/soapstone/steatite** in Sabarkantha district.

Other minerals that occur in the State are: **apatite** and **rock phosphate** in Panchmahals district; **calcite** in Amreli & Bharuch districts; **copper ore** in Banaskantha district; **granite** in Banaskantha, Mahesana & Sabarkantha districts; **graphite** in Panchmahals district; **lead-zinc** and **marble** in Banaskantha & Vadodara districts; **manganese ore** in Panchmahals & Vadodara districts; **vermiculite** in Vadodara district; and **wollastonite** in Banaskantha district. The lignite resources are located in Bharuch, Bhavnagar, Kachchh and Surat districts (Tables - 1 and 2).

Exploration & Development

The details of exploration activities conducted by GSI during 2021-22 are furnished in Table - 3.

Production

Lignite, Natural Gas, Petroleum (Crude), Bauxite, Limestone etc were reported from Gujarat. The value of minor mineral's production is estimated as ₹ 4000 crore for the year 2021-22. There was 143 reporting mines in 2021-22 in case of MCDR minerals (Table-4).

Mineral-based Industry

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

Table – 2: Reserves/Resources of Lignite as on 1.4.2023: Gujarat

(In million tonnes)

District	Proved	Indicated	Inferred	Total
Total	1278.65	283.70	1159.70	2722.05
Kachchh	335.61	56.40	33.09	425.10
Bharuch	724.76	118.59	491.23	1334.58
Bhavnagar	–	–	299.17	299.17
Surat	218.28	108.71	336.21	663.20

Source: Coal Directory of India 2022-23.

Table – 1 : Reserves/Resources of Minerals as on 1.4.2020 : Gujarat

Mineral	Unit	Reserves				Remaining resources						Total resources (A+B)		
		Proved STD 111	Probable		Total (A)	Measured STD331	Indicated STD332	Inferred STD333	Reconnaissance STD334	Total (B)				
			STD121	STD122							Pre-feasibility STD221		Feasibility STD211	
Apatite	tonne	-	-	-	-	-	-	-	-	-	351000	351000	351000	351000
Bauxite	'000 tonnes	83448	2005	15777	101230	86746	41434	21913	29145	22107	82774	11678	295797	397027
Copper														
Ore	'000 tonnes	-	-	-	-	2013	2371	969	129	-	7131	-	12613	12613
Metal	'000 tonnes	-	-	-	-	31.2	35.8	19.67	0.69	-	113.38	-	200.74	200.74
Diatomite	'000 tonnes	-	-	-	-	-	-	-	-	-	811	-	811	811
Fluorite	tonne	-	-	-	-	8630000	-	-	-	5723360	1920	-	14355280	14355280
Graphite	tonne	-	-	-	-	-	-	-	-	2520805	835000	-	3355805	3355805
Lead-Zinc Ore														
Ore	'000 tonnes	-	-	-	-	2013	2371	969	129	-	200	-	5682	5682
Lead metal	'000 tonnes	-	-	-	-	81.94	88.2	34.41	3.9	-	-	-	208.45	208.45
Zinc metal	'000 tonnes	-	-	-	-	111.73	111.44	37.13	1.1	-	-	-	261.4	261.4
Lead-Zinc metal	'000 tonnes	-	-	-	-	-	-	-	-	-	0.9	-	0.9	0.9
Limestone	'000 tonnes	722663	115984	64467	903115	507311	254583	176439	79919	2593098	18317659	160	21929169	22832284
Manganese Ore	'000 tonnes	695	-	0	695	-	-	-	-	-	2180	-	2180	2875
Marl	tonne	50825000	17210000	110000	68145000	26474477	4189000	-	-	-	390000	-	31053477	99198477
Perlite	'000 tonnes	-	-	-	-	140	683	595	-	-	-	988	2406	2406
Rare Earth Elements	tonne	-	-	-	-	-	-	-	-	424000	-	-	424000	424000
Rock	tonne	-	-	-	-	-	-	-	-	-	314820	-	314820	314820
Phosphate														
Vermiculite	tonne	-	-	-	-	-	-	-	-	-	1960	-	1960	1960
Wollastonite	tonne	-	-	-	-	-	-	-	-	-	1990000	-	1990000	1990000

Figures rounded off.

STATE REVIEWS

STATE REVIEWS

Table – 3 : Details of Exploration Activities in Gujarat, 2021-22

Agency/ Mineral/ District	Location	Mapping		Drilling		Sampling (No.)	Remarks Reserves/Resources estimated
		Scale	Area (sq km)	No. of boreholes	Meterage		
GSI REE & RM Banaskantha	Jalotra-Vaghor area	-	-	-	-	-	Geologically the area is comprised of Sendra Ambaji Granitoids intrusive in metasediments of Delhi Supergroup. It mainly consists of syn-tectonic and post tectonic granites. Granitoids are intruded by several microgranite, of varying size, mafic dyke, Basaltic dyke, apliteveins, quartz veins and quartzo-feldspathic veins. In majority, two variants of SendraAmbajigranitoids i.e., Plagioclase rich porphyritic granite, K-feldspar rich porphyritic granite are observed in the area. Rapakivitexture in porphyritic granite is observed throughout the area. Quartz syenite is intruded into both the variants of granites. Alteration in syenite is observed in the form of epidotisation and secondary crystallisation of quartz and flourites along fracture and joint planes. A mafic dyke of nearly 2 km length and 0.15 km width trending N-S is observed near Motipura village which cut across by several aplite and microgranite dykes all trending almost along N50°W-S50°E. The last phase magmatic activity in the area is represented by microgranite in the form of dykes throughout the mapped area along with aplite vein, quartz vein and few quartzo-feldspathic veins. Two phases of microgranites were observed during fieldwork. Older phase is in the form of xenoliths in porphyritic granites and younger phase is in the form of dyke. Two major shear zones trending in NS and NW-SE are present along with small scale shearing have been observed in the study area characterised by mylonitic rock. Based on the field observations, petrographic study and proximity indicators, it seems that late phase microgranite, fluorite bearing quartz syenite and altered granite are potential host for the REE and RM mineralisation. In the thin section study, zircon, monazite, fluorite are observed in

(contd)

STATE REVIEWS

Table - 3 (contd)

Agency/ Mineral/ District	Location	Mapping		Drilling		Sampling (No.)	Remarks Reserves/Resources estimated
		Scale	Area (sq km)	No. of boreholes	Meterage		
Chhota Udepur and Dahod	Khokhra-Mithibor area of Panchmahal	-	-	-	-	-	<p>K-feldspar rich granite and quartz syenite. Alteration like epidotisation, silicification, greisenisations have been observed in investigated block, which also indicate enrichment REE and RM bearing phases in altered zones in granite.</p> <p>A G2 stage exploration with drilling of 5727 m to explore the occurrences of REE beneath the basalt of Deccan Trap was carried out in Central block Ambadungar area in Ambadongar Carbonatite Complex. Lithologically the investigation area comprises different varieties of carbonatite (Sovite, brecciated carbonatite, ferro-carbonatite/Ankerite), carbonate sandstone, phonolite, basalt, dolerite dyke and quartz veins. The pyrochlore crystals with magnetite observed within sovite, brecciated carbonatite and ferro carbonatite in Ambadungar area. Petrography study reveals that the carbonatite mainly is constituted of 80% to 90% calcite whereas apatite, amphibole, pervoskite, zircon and barite occurs as minor constituents. The EPMA study of core samples indicated the presence of REE associated mineral phases like bastnasite, parasite, synchesite, apatite, fluoro apatite and monazite whereas the RM minerals are mainly associated with Pyrochlore. The drilling of 5727 m was completed in FS: 2021-22 and 2022-23 (spill over) to assess the potentiality of carbonatites for REE and Niobium. A total 10 nos. of vertical borehole was drilled in the central block of Ambadungar area with 500 to 600 m vertical depth at 100 x 100 m regular interval. The carbonatite occurs beneath the basalt at vertical depth of 55 m to 90 m whereas the average depth is 100 m. During the exploration out of 5727 m of drilling 4728 m of carbonatite zone which is favorable for REE and Niobium mineralisation has been observed. The zone of REE and Niobium mineralised carbonatite is</p>

(contd)

STATE REVIEWS

Table - 3 (contd)

Agency/ Mineral/ District	Location	Mapping		Drilling		Sampling (No.)	Remarks Reserves/Resources estimated
		Scale	Area (sq km)	No. of boreholes	Meterage		
							observed in each borehole and their vertical depth varies from 450 to 500 m. Besides REE, Pyrochlore, sulphide and magnetite with pyrochloremineralisation are also observed in core of different borehole. Based on the previous analytical data of the core samples, these carbonatite show encouraging value (0.4% average grade with 0.25% cut off) for REE and (400 ppm average grade with 200 ppm cut off) for Niobium
Graphite							
Dahod	Patra-Guvali- Satsera-Gopalpura area	1:12500	-	-	-	-	The large-scale mapping on 1:12,500 scale reveals that the area comprises rocks of Kalinjara Formation belonging to Meghnagar Group of Aravalli Supergroup of rocks. It comprises marble, chlorite schist, carbonaceous phyllite, graphite schist, quartzite, calc silicate, phyllite, dolomitic marble and quartz mica schist and bitite gneiss. The Lunawada Group is unconformably overlain by rocks belonging to Bagh Series which are in turn overlain by Deccan traps, while it is underlain by Udaipur group of rocks represented by granite Gneisses and amphibolites. During the mapping, four separate discontinuous graphite-bearing zones in carbonaceous phyllite were recorded in the area. Based on limited exposures and pitting / trenching in soil cover area, the graphite hosting carbonaceous phyllite body has been traced over a cumulative strike length of 1.29 km from south of Patra village to Dhebar village. The graphite schist/ carbonaceous phyllite band occurs as patchy, impersistent lenses and sometimes associated with impure dolomite. The south Patra graphite schist/ carbonaceous phyllite band has been marked in south of Patra village. The graphite in the south part of this zone is amorphous, hard and thus doesn't qualify the cut-off grade of 10% fixed carbon for amorphous variety. However, the graphite in the northern part is soft,

(contd)

STATE REVIEWS

Table- 3 (concl'd)

Agency/ Mineral/ District	Location	Mapping		Drilling		Sampling (No.)	Remarks Reserves/Resources estimated
		Scale	Area (sq km)	No. of boreholes	Meterage		
							<p>silver-gray to black in colour, greasy and soils hands. Mostly it occurs along the foliation planes as thin layers, small patches and pockets. The north Patra mineralised zone is 650 m and thickness vary from 10 m to 140 m. The overall strike direction of the Patra south band varies from N730W- S730E to N400W- S400E. Sample no. B045 with maximum values of 8.21% is from north Patra mineralised zone. Keeping the cut-off value of fixed carbon at 2%, 8 m wide and 150 m long mineralised zone has been established in trench CH-03 with average fixed carbon content of 2.09%. The Dhebar zone exposed on the right bank of Anas River is flanked by quartzite of Kalinjara Formation on east and Anas bank phyllite on west. The length of the body is ~170 m with thickness of ~12 m. The graphite is lensoidal, much friable here and grey. It shows greasiness and soils hand. The mineralised zone could not be established as the average grade is <2%. Total 05 numbers of graphite samples were studied through Laser Raman Spectroscope. It is confirmed that all the sample contains graphite. The analytical data for MnO, V and Ni of 25 samples out of 100 have been received. Spot samples have given MnO values of 42.39% and 42.11% from Anas River block (Gogia et.al., 2012). The same samples have also given V results of 194 ppm and Ni results of 141 ppm. The manganese-ore deposits observed in the study area occur within the village limits of Rampura and of Mandli. The Mn ore occur associated with smaller exposed quartzite bodies in and around Mandli and Rampura. The deposits occur associated and interbanded with quartzites and form fairly prominent hillocks in the phyllite country. The strike of the quartzite varies from N5°E to N40°E and the dips range from 20°-65° to the west. The ore is chiefly psilomelane and braunite with some pyrolusite.</p>

STATE REVIEWS

**Table – 4 : Mineral Production in Gujarat, 2019-20 to 2021-22
(Excluding Atomic Minerals)**

(Value in ₹'000)

Mineral	Unit	2019-20			2020-21			2021-22 (P)		
		No. of mines	Quantity	Value ^{\$}	No. of mines	Quantity	Value ^{\$}	No. of mines	Quantity	Value ^{\$}
All Minerals		184		76880978	143		54458025	143		46777610
Lignite	'000t	-	10357	-	-	10813	-	-	13331	-
Natural Gas (ut.)	m cu.m	-	1342	-	-	1138	-	-	1017	-
Petroleum (crude)	'000t	-	4707	-	-	4651	-	-	4627	-
Bauxite	t	68	2076329	1439889	63	1497712	1198490	58	2018309	1683681
Manganese Ore	t	1*	-	-	-	-	-	-	-	-
Limestone	'000t	115	22868	5204303	91	22227	5080904	85	23543	4959400
Marl [%]	t	-	1646104	318711	-	1300333	243556	-	900560	133211
Sulphur [#]	t	-	97107	-	-	82450	-	-	117588	-
Minor Minerals		-	-	69918075	-	-	47935075	-	-	40001318

*Note : The number of mines excludes Fuel and Minor minerals.**\$ Excludes the value of Fuel minerals.*** Only labour reported.**% Associate with Limestone.**# Recovered as by-product from oil refineries.***Table – 5 : Principal Mineral-based Industries**

Industry/plant	Capacity ('000 tpy)
Abrasives	
Bombay Mineral Limited Jam Khambhalia	86.4 (Abrasive Grain)
Carborandum Universal Ltd, Okha, Distt Jamnagar.	NA
Carborandum Universal Ltd, Bhatia, Distt Jamnagar	NA
Flexo-Plast Abrasives, Ahmedabad	NA
Orient Abrasive Ltd, Porbandar	75 (Abrasive Grain) 150 (Calcined Bauxite) 30 (Castable Refractory)
Asbestos Products	
Ramco Industries Ltd, Singura, Distt Kachchh.	72
Sanghi Industries Ltd,	36
Sanghipuram, Distt Kachchh.	
U.P. Asbestos Ltd, Valsad.	36
	(contd)

Table - 5 (contd)

Industry/plant	Capacity ('000 tpy)
Cement	
Ambuja Cements Ltd, Ambuja Nagar, Distt Junagadh.	5700
Ambuja Cement Ltd, Magdalla, Distt Surat (G).	1560
Mehta Group Gujarat Sidhee Cement, Sidheegram, Sutrapada Distt Junagadh.	1200
Mehta Group Saurashtra Cement Ltd, Porbandar, Distt Junagadh.	1500
Saurashtra Cement Ltd, Ranavav Porbandar,	3063
Hi Bond Cement, Gondal.	1200
J.K. Laxmi, Kalol, Distt Ganghinagar (G).	1000
J.K. Laxmi, Surat	1350
Sanghi Industries Ltd, Sanghipuram, Distt Kachchh.	4000
Shree Digvijay Cement Co. Ltd, Digvijaygram, Sikka Distt Jamnagar.	1200 (43 Gr.) 1200 (53. Gr.) 1200 (PPC)
	1200 (Oil well cement)
	1200 (Sulphate Resisting P.C.)
Tata Chemicals Ltd, Mithapur, Distt Jamnagar.	500
UltraTech Cement Co. Ltd, Pipavav, Distt Amreli.	6400
	(contd)

STATE REVIEWS

Table - 5 (contd)

Industry/plant	Capacity ('000 tpy)
UltraTech Cement Ltd, (Narmada Cement), Jafrabad, Distt Amreli.	1450
UltraTech Cement Ltd, (Gujarat Cement), Kovaya, Babarkot, Rajula Jafrabad,	6400
UltraTech Cement (formerly a unit of JCCL), Sewagram, Abdasa, Distt Kachchh.	2400
UltraTech Cement (formerly a unit of JCCL), Wanakbori, Distt Kheda (G).	2400
UltraTech Cement Ltd, Magdalla (G).	750
Sparta Cements & Infra Ltd. Bhuj	1000
Vadraj Cement, Mora, Surat	6000
Ceramic	
Unifrax India, Lakhtar	7.5 (Ceramic fiber product)
Orient Glazes Ltd, OGPL Kheda Unit Radhu	35.53
Chemical	
Baroda Rayon Corpn. Ltd, Surat.	15000 (yarn) 21600 (H ₂ SO ₄) 2.2 (sodium sulphate)
Century Chemicals, Nava Nanga, Distt Jamnagar.	108 (refined salt)
Gujarat Alkalies & Chemicals Ltd, Baroda.	14.9 (caustic soda)
Gujarat Alkalies & Chemicals Ltd, Dahej, Distt. Bharuch.	242.6 (caustic Soda) 151.4 (Cl) 33.408 (phosphoric acid)
GHCL Limited, Sutrapada.	1100 (Soda Ash) 71 (Sodium bicarbonate)
Indian Rayon Industries Ltd, Veraval, Distt Junagadh.	21 (yarn) 35.7 (H ₂ SO ₄) 10 (carbon disulphide) 9.3 (sodium sulphate) 91.3 (caustic soda)
Kamadhenu Nutrients Pvt.ltd. Panoli, Ankleshwar	10.8 (Dicalcium phosphate)
Kohler India Corp. Pvt. Ltd, Jhagadia, Talodara	15.02 (2Pc B) 8.29 (lav) 2.25 (Pedestal) 4.73 (tank)
Navin Fluorine Industries Ltd, Surat.	22 (HF)
Nirma Cement Ltd, Ranavav	421.2 (Soda ash)
Nirma Soda Ash Plant Kalatalav, Bhavnagar	1008 (Soda Ash Light) 648 (Soda Dense) 144 (Refined Sodium Bicarbonate) Vaccun Salt (864)
Saurashtra Chemicals Ltd, Porbandar, Distt Porbandar	365 (soda ash) 20.4 (caustic soda) 26.4 (refined bicarbonate)
Shree Sulphurics Pvt. Ltd,	58 (H ₂ SO ₄)

(contd)

Table - 5 (contd)

Industry/plant	Capacity ('000 tpy)
Ankleshwar, Distt Bharuch.	12 (chloro-sulphuric acid)
Tata Chemicals Ltd, Mithapur, Distt Jamnagar.	875 (soda ash)
Copper Smelter	
Hindalco Industries Ltd, Birla Copper, Dahej, Distt Bharuch.	500 (copper smelting) 1670 (H ₂ SO ₄) 15 tonnes (Au) 150 tonnes (Ag)
HCL, Gujarat Copper Project, Jhagadia, Distt. Bharuch.	50 (electrolytic copper) 20 (copper anodes)
Electrode	
Power Electrode Varaval Shapar Kotda Sangani	0.60
Fertilizer	
Aarti Fertilizers, Vapi, Valsad	132 (SSP)
Coromandel International Ltd (Formerly Liberty Phosphate Ltd), Nandesari, Vadodara	100 (SSP) 367 (urea) 108 (DAP) 200 (complex) 196 (AS)
GSFC, Vadodara	200 (complex) 196 (AS)
GSFC, Sikka (Sikka - I & II), Jamnagar	326 (DAP)
GNFC, Bharuch	636.9 (urea) 142.5 (complex)
Hindalco Industries Ltd, Dahej, Distt Bharuch	400 (DAP/ complex)
IFFCO Ltd, Kandla, Distt. Kachchh	2420
IFFCO Ltd, Kalol, Distt. Gandhinagar	602 (urea)
Khaitan Chemicals & Fertilizers Ltd, Dahej, Bharuch	200 (SSP)
KRIBHCO Ltd, Hazira, Distt. Surat	2195 (urea)
Narmada Agro Chemicals Pvt. Ltd, Mangrol, Junagadh	33000 (SSP)
Narmada Bio-chem Pvt. Ltd, Kalyangadh, Ahmedabad	196000 (SSP)
Nirma Ltd, Moraiya, Ahmedabad	100 (SSP)
Sona Phosphates Ltd, Sarigam, Valsad	15 (SSP)
T J Agro Fertilizers Pvt. Ltd, Navsari	22 (SSP)
Foundry	
Steelcast Ltd, Ruvapuri Road, Bhavnagar	30
Intolcast Pvt. Ltd, 16, 17 & 19 Ankur Industrial Complex, Rajkot Gundal Road Shaper, Rajkot	2.4 (steel casting)
Intricast Pvt. Ltd, 25/28 Galaxy Industrial Estate, Rajkot Gundal Road Shaper, Rajkot	1.08 (steel casting)
Invac Cast Pvt. Ltd, 444, 453 & 455 Nana Fofadia Road Bamangam, Vadodara	2.4 (steel casting)

(contd)

STATE REVIEWS

Table - 5 (contd)

Industry/plant	Capacity ('000 tpy)
Gujarat Intuxt Ltd.184/P, Rajkot Gundal Road Shaper, Rajkot	1.8 (steel casting)
Iron & Steel	
Essar Steel Ltd, Hazira, Distt Surat	6700 (sponge iron) 10000 (crude/liquid steel)
Jindal Saw Ltd, Samaghogha, Mundra	900 (Sinter) 580 (Pig Iron)
Ferro Alloys	
Baroda Ferro Alloys Ltd, Panchmahals.	3.5
Essel Mining & Industries Ltd, Vapi, Distt Valsad.	9
Electro Ferro Alloys Ltd, Ahmedabad.	0.3
Sponge Iron	
Electrotherm India Pvt. Ltd, Samakhalli, Distt Kachchh	75
Gallant Metal Ltd, Samakhialli, Distt Kachchh	225000
Global Hi-Tech Industries Ltd, Bhuj, Distt Kachchh	105
Welspun Steel Ltd, Versamedi, Anjar	144
Glass	
Alembic Glass Industries Ltd, Baroda.	35.0
Bhagwati Glass Containers Ltd, Kalol.	8.7
Bharat Glass Tube Ltd, Bharuch.	7.2
Gobind Glass & Industries Ltd, Kadi.	NA
Gopal Glass Works Ltd, Budasan, Distt Mahesana.	40.6
Gujarat Borosil Ltd, Govali, Distt. Bharuch.	62.5
Piramal Glass Ltd, Jambusar.	355 (tpd)

(contd)

Table - 5 (concl'd)

Industry/plant	Capacity ('000 tpy)
Piramal Glass Ltd, Kosamba.	340 (tpd)
Haldyn Glass (Gujarat) Ltd, Padra, Vadodara.	320 TPD
Prestige Glass Industries Pvt Ltd, Vagra.	11.5
Petroleum Refinery	
IOCL, Koyali.	13700
RPL, Jamnagar	33000
RPL, Jamnagar (SEZ).	27000
Essar Oil Ltd, Vadinar.	20000
Refractory	
Calders India Refractorie Ltd, Bhayati Jambudiya, Wankaner	42
Lilanand Magnesite Pvt. Ltd, Dharmpur, Ranavav	10.8
Synthetic Gas	
Reliance Industries Ltd, JG-DTA Gasification Area, Kunalus Lalpur	13122.48
Calcined Bauxite	
Birla VXL Ltd, Porbandar	36
Bombay Minerals Ltd, Jamkhambhaliya	96
Gujarat Credo Mineral Industries Ltd, Naredi, Abdasa	500 (dry beneficiated) 10 (processed bauxite)
Saurashtra Calcine Bauxite & Allied Industries Ltd, Bhatia	39
Shri Natraj Ceramics & Chemical Industries Ltd, Khambhaliya	24

G: Grinding Unit

Data, not readily available for fertilizer and cement industries on respective websites, is taken from Indian Fertilizer Scenario, FAI Statistics, and Survey of Cement Industry & Directory, respectively.