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PIBM 25
400-1996 (DSK-II)

GOVERNMENT OF INDIA
MINISTRY OF MINES
INDIAN BUREAU OF MINES

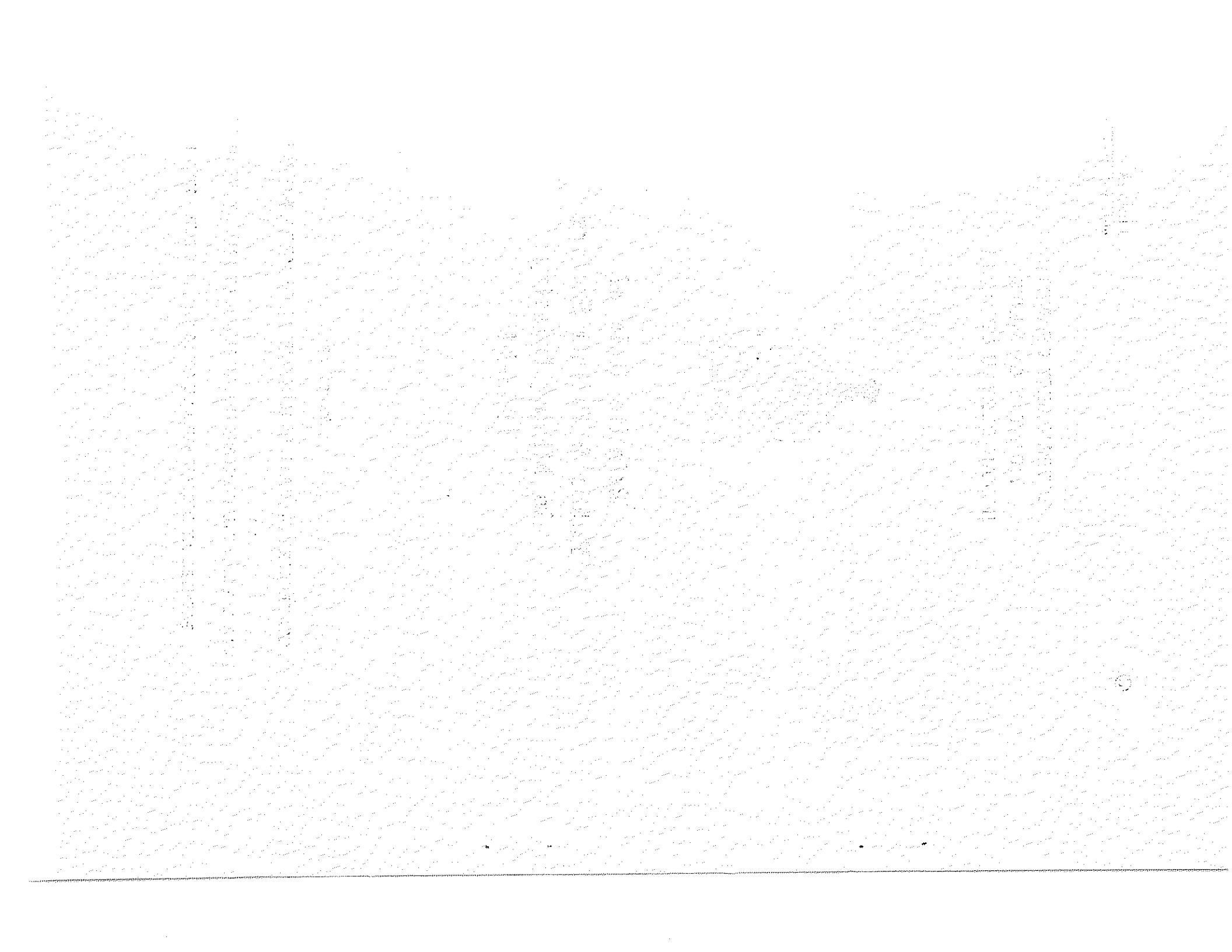
Relative Role of Public & Private Sectors in Mining Industry 1993-94

Issued by

CONTROLLER GENERAL, INDIAN BUREAU OF MINES, NAGPUR

PUBLISHED BY THE CONTROLLER OF PUBLICATIONS, DELHI-110 054

PRINTED AT INDIAN BUREAU OF MINES, NAGPUR - 440 001



PREFACE

As the sequel to the liberalised economic policy, India has opened its mining sector to foreign investment and for more participation of private sector in the mining activity of non-fuel and non-atomic minerals. To give an impetus to this new approach to investment in mining vis-a-vis industrialisation in the country, a need was felt to have information on the role presently played by private and public sectors in mining. This publication titled ***"Relative Role of Public and Private Sectors in Mining Industry, 1993-94"*** is designed to fill the gap and to serve the Mining Industry by providing sectorwise information on various aspects related to Mining, such as reserves, leases, production, explosives, employment, stocks, despatches & royalty, and production of metals and alloys.

This publication covers the minerals which fall under the purview of MCDR 1988 (excluding fuel, atomic and minor minerals). The data included in this issue are based mainly on statutory returns submitted by mine owners to this Department and information collected from other sources.

During 1993-94, public sector contributed a major role in the value of the mineral production with a share of 63% owning just 318 mines out of 3,276 reporting mines. As far as leases and lease areas are concerned, private sector accounted for as much as 93% of the total leases and 69% of the total lease area. Public sector was the sole producer of some metallic and non-metallic minerals while a few non-metallic minerals were exclusively under the private sector.

With the envisaged increased participation of private sector, and also the entry of foreign investors into the Indian Mining Industry, the scenario is likely to undergo a transformation.

I hope this publication would benefit the investors - Indian and Foreign, people connected with the mining industry and also other information seekers in the country.

Nagpur
Date : 16-8-1996

M. Mukherjee
Acting CONTROLLER GENERAL
INDIAN BUREAU OF MINES

1. INTRODUCTION

In the light of the current policy of free economy, the new National Mineral Policy was announced by the Government of India in March,1993.This has thrown open the mining sector covering non- fuel and non-atomic minerals to private sector as well as to foreign investment. This was one more step forward in the programme of economic and industrial reforms in India. To give legal support to the said policy and also to encourage foreign equity investment in joint ventures, the Mines and Minerals (Regulation and Development) Act was amended through an Ordinance in January,1994. During the year 1993-94, a number of foreign companies explored the possibility of setting up joint ventures for mining gold, lead, zinc and diamond.

This publication titled 'Relative Role of Public and Private Sectors in Mining Industry' covering 1993-94 is first of its kind particularly in mineral sector. Though mines in India are both in public sector and private sector, the former has been shouldering the major share of responsibility in mineral exploration and exploitation. This is in line with the then overall Indian economic policy prior to globalisation of Indian mineral sector. In effect, 1993-94 is the first year after globalisation of mineral sector in India. Hence the data presented in the publication relating to public and private sectors for 1993-94 would serve as a trend-line information for assessment of impact of globalisation of Indian economy in mineral sector.

During 1993-94, the entire production of copper ore, gold, lead concentrates, tin concentrate, tungsten concentrate, zinc concentrates, diamond, fluorite, pyrites, salt (rock), sand (others) and silver was reported by public sector. Its contribution was also significant in the production of other important minerals. Out of the total value of mineral production (excluding fuel, atomic and minor minerals) of Rs. 3,049 crores, the share of public sector was 63 percent. The remaining 37 percent accrued from private sector. In labour employment, the percentage ratio of public to private sector was almost 1:1 during the same year. The following pages in this review give details of national mineral inventory, mining leases, number of reporting mines, quantity and value of mineral production, consumption of explosives, despatches, closing stocks as on 31.3.1994 and royalty and production of ferrous & non-ferrous metals with reference to the relative role played by public sector and private sector during 1993-94.

2. NATIONAL MINERAL INVENTORY

Preparation and updation of Mineral Inventory is a continuous process. It provides an overview of geological and techno-economic status of reserves of minerals in the country for each deposit. As per the suggestion of the Expert Group on Mineral Resources set up in 1983-84, systematic updation of the National Mineral Inventory should be done quinquennially. Accordingly, the last updation of mineral inventory was done as on 1.4.1990 for 61 minerals by utilising in-house computer expertise and resources of the Bureau.

The Geological Survey of India is the premier agency for exploration of geological resources. Besides, the State Departments of Geology and Mining and Public Sector Undertakings of Central and State Governments are also engaged in exploration activity. The contribution of private sector in exploration of minerals is mostly confined to major companies, within their leasehold areas.

Allocation of total recoverable reserves under public and private sectors is an impossible task due to the fact that reserves estimated in freehold area do not fall under any sector. Hence recoverable reserves estimated in leasehold areas only have been classified by sectors and are presented in Table-1 (see after this review) for 52 minerals. The break-up of number of deposits as on 1.4.1990 under freehold and leasehold (Public and Private) with percentage share is given below:-

Status of Deposits	No. of deposits	Percentage in Total
All Categories	**11,646**	**100.00**
Freehold	4,496	38.6
Leasehold	7,150	61.4
Public sector	654	5.6
Private sector	6,496	55.8

3. MINING LEASES

Under the Mineral Concession Rules 1960, a total number of 9,207 mining leases covering an area of 710 thousand hectares have been granted as on 1.1.1994 for extraction of metallic and non-metallic minerals. Of this, 8,584 or 93% of the total leases have been granted to private sector companies and the remaining 623 leases or 7% to public sector companies. The corresponding lease areas covered by private and public sectors are 489 thousand hectares or 69% and 221 thousand hectares or 31% of the total leasehold area. As may be seen from the following table which gives information on average lease area granted per lease to public and private sector companies, public sector companies play a major role in extraction of both metallic and non-metallic minerals as compared to private sector companies:

Mineral Group	Average area per lease (Hectares)	
	Public Sector	Private Sector
All Minerals	**355**	**57**
Metallic	591	82
Non-Metallic	237	52

Table-2 (see after this review) gives sectorwise information on number of mining leases granted/executed for extraction of different minerals along with lease area as on 1.1.1994.

4. PRODUCTION

4.1 Reporting mines

The concept of ' Reporting Mine' was expanded further in 1993-94 by including in it such mines which report 'Nil' production during a year but was engaged in developmental work, such as overburden removal, underground driving, winzing, sinking work, exploration by pitting, trenching or drilling in search of mineral deposit. According to the revised concept, there were 3,276 reporting mines in the country during 1993-94. Of these, the private sector accounted for 2,958 mines and the public sector the remaining 318 mines. The distribution of reporting mines according to sector and mineral group is as follows:

Mineral Group	Total	Private Sector	Public Sector
All Minerals	3,276	2,958	318
Metallic	696	571	125
Non-metallic	2,580	2,387	193

Out of 2,958 mines operated by private sector, more than 2,000 mines belong to limestone (622), silica sand (235), iron ore (223), steatite (220), bauxite (187), kaolin (175), manganese ore (151), fireclay (132) and dolomite (120). Table-3 (see after this review) gives mineralwise number of reporting mines by sectors.

4.2 Quantity of Production

During the year 1993-94, 58 MCDR minerals were mined of which 10 belonged to metallic and 48 to non-metallic category. The production of copper ore, gold, lead concentrates, tin concentrates, tungsten concentrates and zinc concentrates, silver, diamond, fluorite concentrate, pyrites, salt (rock), sand (others) and sillimanite was completely under the domain of public sector. The private sector was the sole producer of agate, calcareous sand, calcite, chalk, clay (others), dunite, felsite, fuchsite quartzite, garnet (gem), jasper, ochre, perlite, steatite, wollastonite, and all the minor minerals during 1993-94. The quantitative share of private sector in the production of principal minerals was bauxite 49%, chromite 68%, iron ore 40%, manganese ore 42%, barytes 41%, dolomite 50%, gypsum 3%, kaolin 94%, kyanite 81%, limestone 88% and magnesite 42 percent. Table-4 (see after this review) gives mineralwise quantity and value of mineral production by sectors.

4.3 Value of Production

The value of mineral production falling under the purview of MCDR 1988 (excluding fuel, atomic and minor minerals) was Rs. 3,054 crores in the country in 1993-94. Iron ore accounted for 34% of the value followed by limestone 20%, copper ore 7%, chromite 7%, lead and zinc concentrates 7%, manganese ore 4%, gold 4% and phosphorite 3%. These nine minerals together contributed 86% to the total value of mineral production. The remaining 14% value of mineral production accrued from 49 minerals and 2 byproducts. The public sector outplayed the private sector in terms of value of mineral production by accounting for Rs. 1,929 crores or 63%. The remaining amount of Rs. 1,124 crores or 37% was contributed by private sector. The following table gives percentage distribution of value of mineral production by sectors and mineral groups.

Mineral group	Percentage Distribution		
	Total	Private Sector	Public Sector
All Minerals	**100**	**37**	**63**
Metallic	100	28	72
Non-metallic	100	55	45

The share in value of mineral production of private sector was 42% in bauxite, 66% in chromite, 33% in iron ore, 38% in manganese ore, 30% in dolomite, 81% in kaolin, 69% in limestone, and 38% in magnesite. Table-5 (see after this review) gives unit value of mineral production by sectors during 1993-94. Percentage share of public and private sectors in quantity and value of mineral production during the same year is presented in Table-6 (see after this review).

5. CONSUMPTION OF EXPLOSIVES

Explosives play an important role in the economic development of the country as these are required for activities connected with mining, construction of dams/tunnels, execution of major irrigation projects, well sinking, etc. Over 80% of explosives and accessories produced in the country are used in mining industry and the balance 20% in other industries. Thus, the 'explosives' is one of the main inputs for removal of overburden/waste rock and extraction of minerals.

As many as 1,012 mines, covering 40 metallic and non-metallic minerals were reported to have consumed explosives for removal of overburden/waste rock and extraction of minerals during 1993-94. Of these, 649 mines belong to non-metallic category and the balance 363 to metallic category. Quantities of different types of explosives consumed during 1993-94 are given below:

Type of Explosive	Quantity (Tonnes)	% share
All Explosives	**42,356**	**100**
Slurry-based	21,848	52
ANFO	15,592	37
NG-based	4,635	11
Liquid Oxygen	189	++
Gun Powder	92	++

++ = Negligible

Out of 42,356 tonnes of total explosives used in 1,012 mines, the share of slurry-type was 52%, followed by ANFO 37% and NG-based 11%. The quantity of slurry explosives was the largest due to its popularity in opencast mining. Besides, a small quantity of gunpowder and liquid oxygen was also consumed during the year.

Out of the 1,012 mines using explosives, 805 were in the private sector and the remaining 207 in the public sector. Sixty-one percent of the total explosives was consumed in private sector and 39% in public sector. Although the quantity of ROM per kg. consumption of explosives varied from mineral to mineral, the average rate of consumption of explosives in public and private sectors was almost equal. This can be seen from the following table :

Run -of -Mines (ROM) Tonne/kg of Explosives, 1993-94

Mineral	Total	Private sector	Public sector
All Minerals	**3.88**	**3.92**	**3.83**
Metallic minerals	3.90	3.90	4.14
Bauxite	3.76	3.19	4.14
Chromite	1.23	0.85	2.03
Copper ore	1.46	-	1.46
Gold ore	1.42	-	1.42
Iron ore	5.16	3.83	7.18
Lead & zinc	1.08	-	1.08
Manganese ore	1.89	1.87	1.90
Non -metallic Minerals	**3.87**	**4.12**	**2.95**
Dolomite	7.91	2.02	19.48
Limestone	4.36	4.28	4.92
Magnesite	0.85	0.57	1.07
Phosphorite	0.53	-	0.53
Steatite	0.56	0.56	-
Others	3.98	1.92	4.65

The combined use of explosives for limestone and dolomite resulted in powder factor of dolomite on higher side in public sector.

In the public sector, explosives were used mostly in the metallic mines. Table-7 (see after this review) gives sectorwise details of explosives consumed vis-a-vis ROM production for each mineral.

6. LABOUR EMPLOYMENT

The average daily employment of labour during 1993-94 was 204 thousand which was shared equally by public and private sectors. Distribution of employment according to sector and mineral group is presented below:

Mineral Group	Total	Private sector	Public sector
All Minerals	**2,03,568 (100%)**	**99,476 (49%)**	**1,04,092 (51%)**
Metallic	1,08,498 (100%)	36,037 (33%)	72,461 (67%)
Non-metallic	95,070 (100%)	63,439 (67%)	31,631 (33%)

In the case of public sector, more than two-thirds employment was reported in metallic group, whereas in the case of private sector, the same share was reported in non-metallic group. Table-8 (see after this review) gives mineralwise and sectorwise employment of labour during 1993-94.

7. MINERAL STOCKS

The percentage ratio of closing stocks of seven important minerals to their respective annual production exceeded 30%. The minerals with their respective percentage ratio are bauxite(32%), chromite(52%), manganese ore(31%), ball-clay (106%), barytes (55%), magnesite(85%) and phosphorite(55%). Share of public and private sectors in the closing stocks varies from mineral to mineral. Quantity of closing stocks of ores/minerals as on 31.3.1994 is presented by sectors in Table-9 (see after this review).

8. DESPATCHES AND ROYALTY

The total amount of royalty accrued to State Governments during the year from the exploitation of minerals was about Rs. 399.5 crores. Of this, the share of private sector was Rs. 246.3 crores or 62% and the public sector Rs. 153.2 crores or 38 per cent. The table given below presents contribution of private and public sectors.

(Rs. in crores)

Mineral Group	Total	Private sector	Public sector	% share of Private	% share of Public
All Minerals	**399.5**	**246.3**	**153.2**	**62**	**38**
Metallic minerals	147.7	49.6	98.1	34	66
Non-metallic minerals	251.8	196.7	55.1	78	22

However, the main contribution came from only few minerals. The major contributors are bauxite Rs.18.6 crores (4.7%), copper ore Rs. 7.4 crores (1.9%), chromite Rs. 18.7 crores (4.7%), iron ore Rs. 60.5 crores (15.1%), lead & zinc ore Rs. 34.3 (8.6%), manganese ore Rs. 3.9 crores (1.0%), diamond Rs. 5.4 crores (1.4%), dolomite Rs. 8.2 crores (2.1%), limestone Rs. 221.5 crores (53.1%), and phosphorite Rs. 8.7 crores (2.2%). The contribution to royalty from remaining minerals was about 5 percent. Table-10 (see after this review) gives the amount of royalty accrued and quantity of ore despatched during 1993-94.

9. PRODUCTION OF FERROUS AND NON-FERROUS METALS

In India, many varieties of metals are being produced. These are broadly categorised as (a) ferrous, (b) non-ferrous and (c) ferro-alloys. Gold, silver, copper, lead, zinc, tin, tungsten and aluminium belong to non-ferrous category. Finished & unfinished steel, steel ingot, sponge iron, etc. are treated under ferrous category. Ferro-aluminium, ferro-manganese, ferro-chrome, charge-chrome, ferro-silicon, silico-manganese, etc. belong to the ferro-alloys category. Primary non-ferrous metals are produced in the public sector, whereas ferrous and ferro-alloys are produced in both private and public sectors. About 40% production of ferrous metals was reported from private sector and 60% from public sector in 1993-94. In case of ferro-alloys, more than 90% production was accounted from private sector. Table-11 (see after this review) gives itemwise production of non-ferrous and ferrous metals and ferro-alloys during 1993-94.

Table-1 : Recoverable Reserves as on 1.4.1990

Mineral	unit	Total reserves	Free-hold	Leasehold				
				Total	Private	Public	Percentage of	
							Private	Public
Metallic Minerals								
Bauxite	m.tonne	2525	2009	516	114	402	22.1	77.9
Chromite	"	88	1	87	48	39	55.2	44.8
Copper ore*	"	416	66	350	1	349	0.2	99.8
" Metal	t.tonne	4144	708	3436	6	3430	-	100.0
Gold ore*	t.tonne	17696	2845	14851	-	14851	-	100.0
" Metal	tonne	67	9	58	-	58	-	100.0
Iron ore								
Hematite	m.tonne	9602	2474	7128	1975	5153	27.7	72.3
Magnetite	"	3143	2563	580	94	486	16.2	83.8
Lead & zinc ore	"	186	55	131	-	131	-	100.0
Lead metal	t.tonne	2390	601	1789	-	1789	-	100.0
Zinc metal	"	9866	1521	8345	-	8345	-	100.0
Manganese ore	t.tonne	176	31	145	93	52	64.1	35.9
Molybdenum	"	8040	37	8003	-	8003	-	100.0
Silver ore*	"	143	10	133	-	133	-	100.0
Tin ore*	"	28911	28351	560	-	560	-	100.0
Tungsten ore*	m.tonne	26	11	15	++	15	0.6	99.4

(Contd.)

Table-1 : (Contd.)

Mineral	unit	Total reserves	Free-hold	Leasehold				
				Total	Private	Public	Percentage of Private	Public
Non-metallic Minerals								
Apatite*	m.tonne	14	12	2	-	2	-	100.0
Asbestos	t.tonne	2294	281	2013	1964	49	97.6	2.4
Barytes	m.tonne	70	49	21	4	17	19.0	81.0
Ballclay	t.tonne	13894	12870	1024	1024	-	100.0	-
Bentonite	m.tonne	368	359	9	9	-	100.0	-
Calcite	t.tonnes	10573	1503	9070	9070	-	100.0	-
Chinaclay/ Kaolin	m.tonne	986	753	233	208	25	89.3	10.7
Corundum	tonne	15344	13928	1416	1391	25	98.2	1.8
Diamond*	t.tonne	1085	220	865	-	865	-	100.0
Diaspore	"	1225	1119	106	92	14	86.8	13.2
Diatomite	"	1224	1199	25	25	-	100.0	-
Dolomite	m.tonne	4967	2717	2250	1959	291	87.1	12.9
Felspar	t.tonne	16138	1999	14139	12346	1793	87.3	12.7
Fireclay	m.tonne	697	347	350	286	64	81.7	18.3
Fluorite	t.tonne	2148	526	1622	18	1604	1.1	98.9
Fuller's Earth	m.tonne	228	218	10	10	-	100.0	-
Garnet	"	39	28	11	5	6	45.5	54.5
Granite	m.cu.m	607	422	185	164	21	88.6	11.4
Graphite	t.tonne	3109	1254	1855	945	910	50.9	49.1

(Contd.)

Table-1: (Concld.)

Mineral	unit	Total reserves	Free-hold	Leasehold				
				Total	Private	Public	Percentage of Private	Public
Gypsum	m.tonne	239	187	52	3	49	5.8	94.2
Kyanite	t.tonne	2715	1449	1266	1129	137	89.2	10.8
Lime shale	m.tonnes	76446	61754	14692	11699	2993	79.6	20.4
Magnesite	"	233	113	120	53	67	44.2	55.8
Mica	t.tonne	109	-	109	N.E.	109	-	100.0
Ochre	"	22310	4311	17999	17999	-	100.0	-
Marble	m.tonne	1004	794	210	205	5	97.6	2.4
Phosphate	"	147	28	119	-	119	-	100.0
Pyrite	m.tonne	92	55	37	-	37	-	100.0
Pyrophyllite	t.tonne	5175	543	4632	4123	509	89.0	11.0
Quartz/silica	m.tonne	984	345	639	587	52	91.9	8.1
Quartzite	"	366	209	157	144	13	91.7	8.3
Rock Salt	t.tonne	6285	-	6285	-	6285	-	100.0
Ruby	kg.	469	-	469	-	469	-	100.0
Steatite	m.tonne	84	26	58	58	N.E.	100.0	N.E.
Sillimanite	t.tonne	50695	42961	7734	19	7715	0.2	99.8
Titanium	m.tonne	102	68	34	-	34	-	33.3
Vanadium	m.tonne	13	5	8	-	8	-	100.0
Vermiculite	t.tonne	312	79	233	69	164	29.6	70.4
Wollastonite	"	4286	1536	2750	2750	++	100.0	++
Zircon	"	1196	-	1196	-	1196	-	100.0

* Reserves as on 1.4.1993 . ++ = negligible

Table-2 : Mining Leases in India

(As on 1-1-1994)

Mineral	No. of Leases			Lease Area (in Hect.)		
	Total	Private	Public	Total	Private	Public
All Minerals	**9207**	**8584**	**623**	**710072**	**488845**	**221227**
Metallic Minerals	1580	1372	208	235461	112618	122843
Bauxite	363	345	18	29503	16457	13046
Chromite	32	15	17	10371	3231	7140
Copper ore	16	0	16	13498	0	13498
Gold	8	1	7	6668	43	6625
Iron ore	689	618	71	111311	60635	50676
Lead	8	1	7	9334	-	9334
Manganese ore	462	392	70	53228	32252	20976
Tungsten	1	-	1	201	-	201
Vanadium	1	0	1	1347	0	1347
Non-met. Minerals	**7627**	**7212**	**415**	**474611**	**376227**	**98384**
Agate	9	9	0	390	390	-
Amethyst	8	8	0	186	186	-
Andalusite	1	1	0	61	61	-
Apatite	1	0	1	1040	-	1040
Aquamarine	4	4	-	572	572	-
Asbestos	132	128	4	12676	12474	202
Ballclay	7	7	0	92	92	-
Barytes	140	129	11	4654	4330	324
Calcareous sand	15	15	0	270	270	-
Calcite	118	118	0	3072	3072	-

(Contd.)

Table-2 : (Contd.)

Mineral	No. of Leases			Lease Area (in Hect.)		
	Total	Private	Public	Total	Private	Public
Chalk	124	124	-	555	555	0
Clay (others)	103	100	3	2031	1956	75
Corundum	48	46	2	2989	2940	49
Diamond	3	0	3	1126	0	1126
Diaspore	21	20	1	426	421	5
Dolomite	308	286	22	11346	6736	4610
Emerald	2	2	0	257	257	-
Epidote	1	1	0	47	47	-
Felsite	6	6	0	160	160	-
Felspar	202	195	7	9802	9370	432
Fireclay	505	491	14	30728	29483	1245
Fluorite	23	5	18	6093	1106	4987
Garnet	26	26	0	1103	1103	-
Graphite	180	167	13	7169	5213	1956
Gypsum	170	125	45	25240	6392	18848
Ilmenite	5	0	5	208	-	208
Jasper	27	27	-	2460	2460	-
Kaolin	601	586	15	33495	31193	2302
Kyanite	46	35	11	4140	1983	2157
Laterite	55	54	1	3345	3236	109
Limekankar	24	21	3	1473	877	596
Limeshell	68	61	7	9540	7175	2365

(Contd.)

Table-2 : (Concld.)

Mineral	No. of Leases			Lease Area (in Hect.)		
	Total	Private	Public	Total	Private	Public
Limestone	1817	1715	102	140587	106383	34204
Magnesite	33	22	11	4888	2134	2754
Mica	352	350	2	26135	22671	3464
Ochre	243	243	0	8468	8468	0
Opal	1	1	0	1	1	0
Phosphorite	11	0	11	3153	0	3153
Pyrites	2	0	2	1165	0	1165
Pyrophyllite	69	64	5	3080	2285	795
Quartz	594	562	32	18302	18112	190
Quartzite	55	49	6	2759	1718	1041
Salt (rock)	2	0	2	44	0	44
Sand (others)	24	9	15	4860	389	4471
Shale	75	74	1	1431	1298	133
Silica sand	686	667	19	31625	30269	1356
Sillimanite	24	13	11	3301	926	2375
Slate	48	48	0	1398	1398	0
Steatite	579	571	8	45434	44881	553
Tourmaline	1	1	0	1	1	-
Vermiculite	25	23	2	952	902	50
Wollastonite	3	3	0	281	281	-

Table-3 : Number of Reporting Mines, 1993-94

(By Sectors)

Mineral	Number of Mines		
	Total	Private	Public
All Minerals	**3276**	**2958**	**318**
Metallic Minerals	**696**	**571**	**125**
Bauxite	198	187	11
Chromite	23	10	13
Copper ore	15	-	15
Gold	8	-	8
Iron ore	260	223	37
Lead (conc.)	8	-	8
Manganese ore	180	151	29
Silver (1)	-	-	-
Tin (conc.)	2	-	2
Tungsten (conc.)	2	-	2
Zinc (conc.) (2)	-	-	-
Non-Metallic Minerals	**2580**	**2387**	**193**
Agate	5	5	-
Apatite	2	1	1
Asbestos	63	62	1
Ballclay	58	56	2
Barytes	32	30	2
Calcareous sand	13	13	-
Calcite	10	10	-

(Contd.)

Table-3 : (Contd.)

Mineral	Number of Mines		
	Total	Private	Public
Chalk	76	76	-
Clay (others)	8	8	-
Corundum	13	12	1
Diamond	2	-	2
Diaspore (3)	-	-	-
Dolomite	128	120	8
Dunite (4)	-	-	-
Emerald	3	3	-
Felsite	4	4	-
Felspar	78	76	2
Fireclay	135	132	3
Flourite (conc.)	-	-	-
Fluorite (graded)	11	1	10
Fuchsite quartzite	2	2	-
Garnet (abrasive)	17	16	1
Garnet (gem)	-	-	-
Graphite (R.O.M.)	47	45	2
Gypsum	49	19	30
Jasper	24	24	-
Kaolin	182	175	7
Kyanite	8	7	1

(Contd.)

Table-3 : (Concld.)

Mineral	Number of Mines		
	Total	Private	Public
Laterite	22	20	2
Limekankar	14	12	2
Limeshell	21	18	3
Limestone	672	622	50
Magnesite	17	11	6
Mica (crude)	112	100	12
Ochre	50	50	-
Perlite	1	1	-
Phosphorite	12	-	12
Pyrites	2	-	2
Pyrophyllite	42	40	2
Quartz	112	105	7
Quartzite	35	32	3
Salt (rock)	2	-	2
Sand (others)	7	-	7
Shale	2	1	1
Silica sand	238	235	3
Sillimanite	4	-	4
Slate	13	12	1
Steatite	220	220	-
Sulphur (5)	-	-	-
Vermiculite	8	7	1
Wollastonite	4	4	-

1) Recovered as byproduct

2) Covered under Lead (conc.)

3) Associated mineral with pyrophyllite

4) Associated mineral with magnesite

5) Recovered as byproduct from oil refineries & fertiliser plants

Table-4 : Quantity & Value of Mineral Production, 1993-94

(By Sectors)

Mineral	Unit of Quantity	Quantity			Value		
		Total	Private sector	Public sector	Total	Private sector	Public sector
All Mineral					**30535133**	**11239782**	**19295351**
Met. Minerals					**20547476**	**5730579**	**14816897**
Bauxite	tonne	5534913	2695948	2838965	799052	332634	466418
Chromite	tonne	1064684	727339	337345	2283139	1500668	782471
Copper ore	tonne	5009050	-	5009050	2149841	-	2149841
Gold	kg.	2075	-	2075	1091955	-	1091955
Iron ore	tonne	59645	24121	35524	10393914	3385694	7008220
Lead (conc.)	tonne	53850	-	53850	468543	-	468543
Manganese ore	tonne	1696111	705504	990607	1348716	511583	837133
Silver (1)	kg.	56096	-	56096	347053	-	347053
Tin (conc.)	kg.	127340	-	127340	10187	-	10187
Tungsten (conc.)	kg.	5247	-	5247	658	-	658
Zinc (conc.) (2)	tonne	290152	-	290152	1654418	-	1654418
Non-met Minerals					**9987657**	**5509203**	**4478454**
Agate	tonne	725	725	-	374	374	-
Apatite	tonne	12342	2952	9390	10601	3690	6911
Asbestos	tonne	41725	41475	250	22199	19308	2891
Ballclay	tonne	367562	324096	43466	36705	31792	4913
Barytes	tonne	526346	213528	312818	208888	42280	166608
Calcareous sand	tonne	221218	221218	-	16481	16481	-
Calcite	tonne	70793	70793	-	15973	15973	-

(Contd.)

Table-4 : (Contd.)

Mineral	Unit of Quantity	Quantity			Value		
		Total	Private sector	Public sector	Total	Private sector	Public sector
Chalk	tonne	109397	109397	-	22670	22670	-
Clay (others)	tonne	42308	42308	-	1171	1171	-
Corundum	kg.	20709	5158	15551	2692	97	2595
Diamond	carat	19222	-	19222	107649	-	107649
Diaspore (3)	tonne	11318	10679	639	10869	9946	923
Dolomite	tonne	3349526	1688098	1661428	622872	189623	433249
Dunite (4)	tonne	7597	7597	-	2667	2667	-
Emerald	kg.	-	-	-	-	-	-
Felsite	tonne	964	964	-	694	694	-
Felspar	tonne	87155	80474	6681	8970	7488	1482
Fireclay	tonne	427824	412511	15313	39349	37518	1831
Fluorite (conc.)	tonne	22773	-	22773	118597	-	118597
Fluorite (graded)	tonne	4402	190	4212	10826	630	10196
Fuchsite quartzite	tonne	154	154	-	77	77	-
Garnet (abrasive)	tonne	48383	45893	2490	9631	7440	2191
Garnet (gem)	kg.	841	841	-	67	67	-
Graphite (R.O.M.)	tonne	83956	70335	13621	23321	20597	2724
Gypsum	tonne	1685531	51721	1633810	223560	6528	217032
Jasper	tonne	5556	5556	-	967	967	-
Kaolin	tonne	645080	605408	39672	329289	265434	63855
Kyanite	tonne	10736	8730	2006	4574	2867	1707
Laterite	tonne	469095	423815	45280	20892	20141	751
Limekankar	tonne	123296	48695	74601	6657	3177	3480
Limeshell	tonne	109595	60853	48742	24132	10869	13263
Limestone	tonne	83159	73072	10087	6211638	4289186	1922452

(Contd.)

Table-4 : (Concld.)

Mineral	Unit of Quantity	Quantity			Value		
		Total	Private	Public	Total	Private	Public
Magnesite	tonne	374597	155613	218984	266597	102468	164129
Mica (crude)	tonne	2124	1847	277	23329	18654	4675
Mica(waste & scrap)	tonne	913	913	-	-	-	-
Ochre	tonne	202405	202405	-	14082	14082	-
Perlite	tonne	254	254	-	254	254	-
Phosphorite	tonne	1035517	493	1035024	1020142	39	1020103
Pyrites	tonne	115000	-	115000	50025	-	50025
Pyrophyllite	tonne	92373	87984	4389	13969	13126	843
Quartz	tonne	177608	140290	37318	19037	9845	9192
Quartzite	tonne	93985	86177	7808	16949	16380	569
Salt (rock)	tonne	3100	-	3100	2170	-	2170
Sand (others)	tonne	1444829	-	1444829	35418	-	35418
Shale	tonne	192455	165431	27024	3934	3177	757
Silica sand	tonne	1902445	1309547	592898	125833	89896	35937
Sillimanite	tonne	12287	-	12287	24150	-	24150
Slate	tonne	10027	10021	6	1592	1581	11
Steatite	tonne	421257	421257	-	173532	173532	-
Sulphur (5)	tonne	17579	-	17579	43700	-	43700
Vermiculite	tonne	2322	1549	773	1938	463	1475
Wollastonite	tonne	62029	62029	-	36021	36021	-

1) Recovered as byproduct

2) Covered under Lead (conc.)

3) Associated mineral with pyrophyllite

4) Associated mineral with magnesite

5) Recovered as byproduct from oil refineries & fertiliser plants

Table-5 : Unit Value of Mineral Production, 1993-94

(By Sectors)

(Unit Value in Rs.)

Mineral	Unit of Quantity	Total	Private	Public
Metallic Minerals				
Bauxite	tonne	144.37	123.38	164.29
Chromite	tonne	2144.43	2063.23	2319.50
Copper ore	tonne	429.19	-	429.19
Gold	kg.	526243.37	-	526243.37
Iron ore	tonne	174.26	140.36	197.28
Lead (conc.)	tonne	8700.89	-	700.89
Manganese ore	tonne	795.18	725.13	845.07
Silver	kg.	6186.77	-	6186.77
Tin (conc.)	kg.	80.00	-	80.00
Tungsten (conc.)	kg.	125.40	-	125.40
Zinc (conc.)	tonne	5701.90	-	5701.90
Non-metallic Minerals				
Agate	tonne	515.86	515.86	-
Apatite	tonne	858.94	1250.00	736.00
Asbestos	tonne	532.03	465.53	11564.00
Ballclay	tonne	99.86	98.09	113.03
Barytes	tonne	396.86	198.01	532.60
Calcareous sand	tonne	74.50	74.50	-
Calcite	tonne	225.63	225.63	-
Chalk	tonne	207.23	207.23	-

(Contd.)

Table-5 : (Contd.)

Mineral	Unit of Quantity	Total	Private	Public
Clay (others)	tonne	27.68	27.68	-
Corundum	kg.	129.99	18.81	166.87
Diamond	carat	5600.30	-	5600.30
Diaspore	tonne	960.33	931.36	1444.44
Dolomite	tonne	185.96	112.33	260.77
Dunite	tonne	351.06	351.06	-
Emerald	kg.	-	-	-
Felsite	tonne	719.92	719.92	-
Felspar	tonne	102.92	93.05	221.82
Fireclay	tonne	91.97	90.95	119.57
Fluorite (conc.)	tonne	5207.79	-	5207.79
Fluorite (graded)	tonne	2459.34	3315.79	2420.70
Fuchsite quartzite	tonne	500.00	500.00	-
Garnet (abrasive)	tonne	199.06	162.12	879.92
Garnet (gem)	kg.	79.67	79.67	-
Graphite (R.O.M.)	tonne	277.78	292.84	199.99
Gypsum	tonne	132.63	126.22	132.84
Jasper	tonne	174.05	174.05	-
Kaolin	tonne	510.46	438.44	1609.57
Kyanite	tonne	426.04	328.41	850.95
Laterite	tonne	44.54	47.52	16.59
Limekankar	tonne	53.99	65.24	46.65

(Contd.)

Table-5 : (Concld.)

Mineral	Unit of Quantity	Total	Private	Public
Limeshell	tonne	220.19	178.61	272.11
Limestone	tonne	74.70	58.70	190.59
Magnesite	tonne	711.69	658.48	749.50
Mica (crude)	tonne	10983.52	10099.62	16877.26
Mica (waste & scrap)	tonne	0.00	0.00	-
Ochre	tonne	69.57	69.57	-
Perlite	tonne	1000.00	1000.00	-
Phosphorite	tonne	985.15	79.11	985.58
Pyrites	tonne	435.00	-	435.00
Pyrophyllite	tonne	151.22	149.19	192.07
Quartz	tonne	107.19	70.18	246.32
Quartzite	tonne	180.34	190.07	72.87
Salt (rock)	tonne	700.00	-	700.00
Sand (others)	tonne	24.51	-	24.51
Shale	tonne	20.44	19.20	28.01
Silica sand	tonne	66.14	68.65	60.61
Sillimanite	tonne	1965.49	-	1965.49
Slate	tonne	158.77	157.77	1833.33
Steatite	tonne	411.94	411.94	-
Vermiculite	tonne	834.63	298.90	1908.15
Wollastonite	tonne	580.71	580.71	-

Table-6 : Percentage Dsitribution of Mineral Production, 1993-94

(By Sectors)

Mineral	Quantity		Value	
	Private	Public	Private	Public
Metallic Minerals				
Bauxite	48.71	51.29	41.63	58.37
Chromite	68.32	31.68	65.73	34.27
Copper ore	-	100.00	-	100.00
Gold	-	100.00	-	100.00
Iron ore	40.44	59.56	32.57	67.43
Lead (conc.)	-	100.00	-	100.00
Manganese ore	41.60	58.40	37.93	62.07
Silver	-	100.00	-	100.00
Tin (conc.)	-	100.00	-	100.00
Tungsten (conc.)	-	100.00	-	100.00
Zinc (conc.)	-	100.00	-	100.00
Non-metallic Minerals				
Agate	100.00	-	100.00	-
Apatite	23.92	76.08	34.81	65.19
Asbestos	99.40	0.60	86.98	13.02
Ballclay	88.17	11.83	86.61	13.39
Barytes	40.57	59.43	20.24	79.76
Calcareous sand	100.00	-	100.00	-
Calcite	100.00	-	100.00	-
Chalk	100.00	-	100.00	-

(Contd.)

Table-6 : (Contd.)

Mineral	Quantity		Value	
	Private	Public	Private	Public
Clay (others)	100.00	-	100.00	-
Corundum	24.91	75.09	3.60	96.40
Diamond	-	100.00	-	100.00
Diaspore	94.35	5.65	91.51	8.49
Dolomite	50.40	49.60	30.44	69.56
Dunite	100.00	-	100.00	-
Emerald	-	-	-	-
Felsite	100.00	-	100.00	-
Felspar	92.33	7.67	83.48	16.52
Fireclay	96.42	3.58	95.35	4.65
Flourite (conc.)	-	100.00	-	100.00
Fluorite (graded)	4.32	95.68	5.82	94.18
Futchsite_quartzite	100.00	-	100.00	-
Garnet (abrasive)	94.85	5.15	77.25	22.75
Garnet (gem)	100.00	-	100.00	-
Graphite (R.O.M.)	83.78	16.22	88.32	11.68
Gypsum	3.07	96.93	2.92	97.08
Jasper	100.00	-	100.00	-
Kaolin	93.85	6.15	80.61	19.39
Kyanite	81.32	18.68	62.68	37.32
Laterite	90.35	9.65	96.41	3.59

(Contd.)

Table-6 : (Concld.)

Mineral	Quantity		Value	
	Private	Public	Private	Public
Limekankar	39.49	60.51	47.72	52.28
Limeshell	55.53	44.47	45.04	54.96
Limestone	87.87	12.13	69.05	30.95
Magnesite	41.54	58.46	38.44	61.56
Mica (crude)	86.96	13.04	79.96	20.04
Mica (waste&scrap)	100.00	-	100.00	-
Ochre	100.00	-	100.00	-
Perlite	100.00	-	100.00	-
Phosphorite	0.05	99.95	-	100.00
Pyrites	-	100.00	-	100.00
Pyrophyllite	95.25	4.75	93.97	6.03
Quartz	78.99	21.01	51.71	48.28
Quartzite	91.69	8.31	96.64	3.36
Salt (rock)	-	100.00	-	100.00
Sand (others)	-	100.00	-	100.00
Shale	85.96	14.04	80.76	19.24
Silica sand	68.83	31.17	71.44	28.56
Sillimanite	-	100.00	-	100.00
Slate	99.94	0.06	99.31	0.69
Steatite	100.00	-	100.00	-
Sulphur	-	100.00	-	100.00
Vermiculite	66.71	33.29	23.89	76.11
Wollastonite	100.00	-	100.00	-

Table-7 : Consumption of Explosives, 1993-94

(By Sectors)

(In tonnes)

Mineral	No.of mines			R.O.M.Generated			Explosives		
	Total	Private	Public	Total	Private	Public	Total	Private	Public
All Minerals	**1012**	**805**	**207**	**164543350**	**101279903**	**63263447**	**42356**	**25823**	**16533**
Met. Minerals	363	257	106	84393973	34030553	50363420	21650	9485	12165
Bauxite	71	62	9	3923004	1326775	2596229	1043	416	627
Chromite	20	9	11	873447	403516	469931	708	476	232
Copper ore	14	-	14	4970531	-	4970531	3408	-	3408
Gold	7	-	7	405385	-	405385	286	-	286
Iron ore	167	135	32	70945208	31732140	39213068	13749	8290	5459
Lead & zinc ore	8	-	8	1807517	-	1807517	1678	-	1678
Manganese ore	76	51	25	1468881	568122	900759	778	303	475
Non-met. Minerals	**649**	**548**	**101**	**80149377**	**67249350**	**12900027**	**20706**	**16338**	**4368**
Apatite	2	1	1	11447	2352	9095	1	-	1
Asbestos	13	12	1	4901	4668	233	36	32	4
Ballclay	1	1	-	++	++	-	++	++	-
Barytes	14	12	2	301883	28990	272893	58	10	48
Calcite	4	4	-	83293	83293	-	39	39	-
Clay(others)	1	1	-	11588	11588	-	129	129	-
Diamond	1	-	1	163845	-	163845	53	-	53
Diaspore	-	-	-	41	-	41	++	-	++
Dolomite	46	39	7	1312337	358004	954333	166	117	49
Felspar	4	4	782	782	-	-	-	-	-
Fluorite (graded)	8	7	1	125282	125264	18	71	71	++

(Contd.)

Table-7 : (Concld.)

Mineral	No.of mines			R.O.M.Generated			Explosives		
	Total	Private	Public	Total	Private	Public	Total	Private	Public
Garnet (abrasive)	1	1	-	30279	30279	-	21	21	-
Graphite (R.O.M.)	8	6	2	111336	15774	95562	14	11	3
Gypsum	6	-	6	228899	-	228899	24	-	24
Kaolin	1	1	-	1990	1990	-	1	1	-
Kyanite	2	2	-	3304	3304	-	++	++	-
Laterite	1	1	-	27524	27524	-	4	4	-
Limestone	359	318	41	75512144	65773343	9738801	17337	15357	1980
Magnesite	16	10	6	363543	108453	255090	429	191	238
Mica (crude)	51	46	5	1880	1765	115	88	86	2
Ochre	1	1	-	77773	77773	-	5	5	-
Phosphorite	11	-	11	1006845	-	1006845	1898	-	1898
Pyrites	2	-	2	114594	-	114594	33	-	33
Pyrophyllite	7	5	2	21000	18643	2357	2	1	1
Quartz	18	13	5	72963	37304	35659	15	2	13
Quartzite	3	1	2	17869	7939	9930	12	1	11
Salt (rock)	2	-	2	3070	-	3070	2	-	2
Sand (others)	1	-	1	1736	-	1736	++	-	++
Silica sand	20	20	-	350674	350674	-	15	15	-
Sillimanite	1	-	1	5513	-	5513	7	-	7
Slate	2	-	2	1398	-	1398	1	-	1
Steatite	40	40	-	117040	117040	-	208	208	-
Wollastonite	2	2	-	62604	62604	-	37	37	-

++ = negligible

Table-8 : Employment in Mines, 1994-95

(By Sector & Sex)

Mineral	Total			Private			Public		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
All Minerals	**203568**	**173055**	**30513**	**99476**	**79818**	**19658**	**104092**	**93237**	**10855**
Metallic Minerals	108498	92031	16467	36037	27342	8695	72461	64689	7772
Bauxite	7769	5971	1798	5230	4005	1225	2539	1966	573
Chromite	10775	8505	2270	6298	4795	1503	4477	3710	767
Copper ore	13852	13850	2	-	-	-	13852	13850	2
Gold	8246	8111	135	-	-	-	8246	8111	135
Iron ore	43351	37017	6334	16809	13646	3163	26542	23371	3171
Lead (conc.)	6330	6302	28	-	-	-	6330	6302	28
Manganese ore	18053	12153	5900	7700	4896	2804	10353	7257	3096
Silver (1)	-	-	-	-	-	-	-	-	-
Tin (conc.)	-	-	-	-	-	-	-	-	-
Tungsten (conc.)	122	122	-	-	-	-	122	122	-
Zinc (conc.)(2)	-	-	-	-	-	-	-	-	-
Non-met. Minerals	**95070**	**81024**	**14046**	**63439**	**52476**	**10963**	**31631**	**28548**	**3083**
Agate	62	44	18	62	44	18	-	-	-
Apatite	342	327	15	16	6	10	326	321	5
Asbestos	997	781	216	937	722	215	60	59	1
Balclay	1153	847	306	1058	792	266	95	55	40
Barytes	659	584	75	399	378	21	260	206	54
Calcareous sand	3	3	-	3	3				
Calcite	77	77	-	77	77				

(Contd.)

Table-8 : (Contd.)

Mineral	Total			Private			Public		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
Chalk	975	481	494	975	481	494	-	-	-
Clay (others)	77	66	11	77	66	11	-	-	-
Corundum	151	113	38	76	68	8	75	45	30
Diamond	393	362	31	-	-	-	393	362	31
Diaspore(3)	-	-	-	-	-	-	-	-	-
Dolomite	6157	4122	2035	3752	2426	1326	2405	1696	709
Dunite(4)	-	-	-	-	-	-	-	-	-
Emerald	35	35	-	35	35	-	-	-	-
Felsite	42	37	5	42	37	5	-	-	-
Felspar	625	376	249	583	351	232	42	25	17
Fireclay	1918	1458	460	1825	1365	460	93	93	-
Flourite(conc.)	-	-	-	-	-	-	-	-	-
Fluorite(graded)	973	856	117	20	20	-	953	836	117
Fuch-quartzite	29	27	2	29	27	2	-	-	-
Garnet (abrasive)	982	917	65	179	144	35	803	773	30
Garnet (gem)	-	-	-	-	-	-	-	-	-
Graphite(R.O.M.)	2599	2049	550	2487	1937	550	112	112	-
Gypsum	1248	961	287	611	328	283	637	633	4
Jasper	97	91	6	97	91	6	-	-	-
Kaolin	5966	5108	858	5318	4660	658	648	448	200
Kyanite	364	322	42	329	287	42	35	35	-

(Contd.)

Table-8 : (Concld.)

Mineral	Total			Private			Public		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
Laterite	283	211	72	253	181	72	30	30	-
Limekankar	383	268	115	330	215	115	53	53	-
Limeshell	269	267	2	165	163	2	104	104	-
Limestone	39106	36506	2600	24659	22963	1696	14447	13543	904
Magnesite	5514	4498	1016	2558	1747	811	2956	2751	205
Mica (crude)	1974	1908	66	1530	1464	66	444	444	-
Mica (waste&scrap)	-	-	-	-	-	-	-	-	-
Ochre	658	612	46	658	612	46	-	-	-
Perlite	8	8	-	8	8	-	-	-	-
Phosphorite	3042	2789	253	-	-	-	3042	2789	253
Pyrites	633	633	-	-	-	-	633	633	-
Pyrophyllite	1408	839	569	1328	792	536	80	47	33
Quartz	1174	660	514	744	496	248	430	164	266
Quartzite	666	631	35	656	621	35	10	10	-
Salt (rock)	65	64	1	-	-	-	65	64	1
Sand (others)	31	31	-	-	-	-	31	31	-
Shale	7	7	-	7	7	-	-	-	-
Silica sand	4880	3764	1116	4526	3413	1113	354	351	3
Sillimanite	1775	1632	143	-	-	-	1775	1632	143
Slate	383	295	88	213	145	68	170	150	20
Steatite	5372	4498	874	5372	4498	874	-	-	-
Sulphur (5)	-	-	-	-	-	-	-	-	-
Vermiculite	157	107	50	87	54	33	70	53	17
Wollastonite	1358	752	606	1358	752	606	-	-	-

1)Recovered as byproduct

2)Covered under Lead (conc.)

3)Associated mineral with Pyrophyllite

4)Associate mineral with magnesite

5)Recovered as by product from oil refineries & fertiliser plants

Table-9 : Closing Stocks as on 31-3-1994

Mineral	Unit	Quantity of Closing Stock		
		Total	Private	Public
Metallic Minerals				
Bauxite	tonne	1744856	1304716	440140
Chromite	tonne	558078	234568	323510
Copper ore	tonne	420313	-	420313
Gold	kg.	-	-	-
Iron ore	t.tonne	4637	3170	1467
Lead (conc.)	tonne	14949	-	14949
Manganese ore	tonne	518275	275957	242318
Silver	kg.	-	-	-
Tin (conc.)	kg.	9972	-	9972
Tungsten (conc.)	kg.	-	-	-
Zinc (conc.)	tonne	112005	-	112005
Non-metallic Minerals				
Agate	tonne	18	18	-
Apatite	tonne	47113	3083	44030
Asbestos	tonne	14933	14931	2
Ballclay	tonne	391288	81517	309771
Barytes	tonne	288818	217742	71076
Calcareous sand	tonne	-	-	-
Calcite	tonne	117529	117529	-
Chalk	tonne	27717	27717	-
Clay(others)	tonne	6045	6045	-

(Contd.)

Table-9 : (Contd.)

Mineral	Unit	Quantity of Closing Stock		
		Total	Private	Public
Corundum	kg.	41202	17734	23468
Diamond	carat	1937	-	1937
Diaspore	tonne	2915	2370	545
Dolomite	tonne	638506	402788	235718
Dunite	tonne	964	964	-
Emerald	kg.	3	3	-
Felsite	tonne	744	744	-
Felspar	tonne	41749	32677	9072
Fireclay	tonne	130719	104244	26475
Fluorite (conc.)	tonne	-	-	-
Fluorite (graded)	tonne	5815	23	5792
Fuchsite quartzite	tonne	127	127	-
Garnet (abrasive)	tonne	16565	15866	699
Garnet (gem)	kg.	240	240	-
Graphite (r.o.m.)	tonne	41101	19042	22059
Gypsum	tonne	259648	24283	235365
Jasper	tonne	442	442	-
Kaolin	tonne	157740	151317	6423
Kyanite	tonne	17290	9079	8211
Laterite	tonne	62792	62792	
Limekankar	tonne	16312	13346	2966

(Contd.)

Table-9 : (Concld.)

Mineral	Unit	Quantity of Closing Stock		
		Total	Private	Public
Limeshell	tonne	6439	1822	4617
Limestone	t.tonne	7726	5800	1926
Magnesite	tonne	317136	57197	259939
Mica (crude)	tonne	396	396	-
Mica (waste&scrap)	tonne	-	-	-
Ochre	tonne	63752	63752	-
Perlite	tonne	3	3	-
Phosphorite	tonne	572562	891	571671
Pyrites	tonne	37772	-	37772
Pyrophyllite	tonne	70480	68968	1512
Quartz	tonne	50470	40170	10300
Quartzite	tonne	19035	18342	693
Salt (rock)	tonne	174	-	174
Sand (others)	tonne	123902	-	123902
Shale	tonne	-	-	-
Silica sand	tonne	108962	108876	86
Sillimanite	tonne	665	-	665
Slate	tonne	675	550	125
Steatite	tonne	132141	132141	-
Vermiculite	tonne	11179	7059	4120
Wollastonite	tonne	6406	6406	-

Table-10 : Quantity of Minerals Despatches& Royalty Accrued, 1993-94

Mineral	Unit	Despatches			Royalty(Rs.'000)		
		Total	Private	Public	Total	Private	Public
All Minerals					**3995240**	**2463571**	**1531669**
Metallic Minerals					**1476865**	**496081**	**980784**
Bauxite	tonne	5466856	2643193	2823663	185872	89868	96004
Chromite	tonne	1038594	798499	240095	187352	150004	37348
Copper ore	tonne	-	-	-	73535	-	73535
Gold	kg.	-	-	-	21739	-	21739
Iron ore	tonne	59800	24171	35629	605405	241340	364065
Lead (conc.)	tonne	-	-	-	343496	-	343496
Manganese ore	tonne	1577209	681222	895987	39069	14869	24200
Silver	kg.	-	-	-	19073	-	19073
Tin (conc.)	kg.	-	-	-	1222	-	1222
Tungsten (conc.)	kg.	-	-	-	102	-	102
Zinc (conc.) (1)	tonne	-	-	-	-	-	-
Non-Metallic Minerals					**2518375**	**1967490**	**550885**
Agate	tonne	749	749	-	55	55	-
Apatite	tonne	11283	3055	8228	359	214	145
Asbestos	tonne	40353	39933	420	2186	1934	252
Ballclay	tonne	340184	308143	32041	4763	4314	449
Barytes	tonne	500928	148417	352511	15165	4584	10581
Calcareous sand	tonne	221218	221218	-	5530	5530	-
Calcite	tonne	69849	69849	-	3073	3073	-
Chalk	tonne	109782	109782	-	2745	2745	-

(Contd.)

Table-10 : (Contd.)

Mineral	Unit	Despatches			Royalty(Rs.000)		
		Total	Private	Public	Total	Private	Public
Clay (others)	tonne	43772	43772	-	175	175	-
Corundum	kg.	19395	3541	15854	4	1	3
Diamond	carat	20007	-	20007	54500	-	54500
Diaspore	tonne	10821	10187	634	898	845	53
Dolomite	tonne	3291408	2521760	769648	82285	63044	19241
Dunite	tonne	6633	6633	-	320	320	-
Emerald	kg.	-	-	-	-	-	-
Felsite	tonne	839	839	-	83	83	-
Felspar	tonne	91234	79526	11708	1369	1193	176
Fireclay	tonne	434373	414909	19464	5647	5394	253
Flourite (conc.)	tonne	22773	-	22773	-	-	-
Fluorite (graded)	tonne	3678	274	3404	473	35	438
Fuchsquartzite	tonne	90	90	-	77	77	-
Garnet (abrasive)	tonne	39386	36896	2490	1772	1660	112
Garnet (gem)	kg.	649	649	-	8	8	-
Graphite (R.O.M.)	tonne	71104	57239	13865	4977	4006	971
Gypsum	tonne	1612440	56387	1556053	32249	1128	31121
Jasper	tonne	5503	5503	-	116	116	-
Kaolin	tonne	673453	632796	40657	16532	14011	2521
Kyanite	tonne	8369	6205	2164	335	248	87
Laterite	tonne	448636	403356	45280	2446	2199	247
Limekankar	tonne	119860	43842	76018	2997	1096	1901

(Contd.)

Table-10 : (Concld.)

Mineral	Unit	Despatches			Royalty(Rs.000)		
		Total	Private	Public	Total	Private	Public
Limeshell	tonne	108992	60687	48305	2725	1517	1208
Limestone	t.tonne	81740	71685	10055	2120975	1797175	323800
Magnesite	tonne	341581	168446	173135	8539	4211	4328
Mica (crude)	tonne	2188	1912	276	744	650	94
Mica (waste&scrap)	tonne	-	-	-	-	-	-
Ochre	tonne	199370	199370	-	1994	1994	-
Perlite	tonne	266	266	-	30	30	-
Phosphorite	tonne	958397	666	957731	87490	15	87475
Pyrites	tonne	98185	-	98185	1351	-	1351
Pyrophyllite	tonne	91759	85329	6430	2018	1877	141
Quartz	tonne	180611	138906	41705	2167	1667	500
Quartzite	tonne	94476	86518	7958	1134	1038	96
Salt (rock)	tonne	3077	-	3077	3	-	3
Sand (others)	tonne	1427557	-	1427557	571	-	571
Shale	tonne	192840	165431	27409	47	38	9
Silica sand	tonne	1892623	1299324	593299	22712	15592	7120
Sillimanite	tonne	12424	-	12424	1118	-	1118
Slate	tonne	10188	10182	6	408	408	-
Steatite	tonne	407578	407578	-	18030	18030	-
Vermiculite	tonne	1282	560	722	36	16	20
Wollastonite	tonne	64306	64306	-	5144	5144	-

1.Covered under Lead(conc.)

TABLE-11 : PRODUCTION OF NON-FERROUS METALS, FERROUS METALS AND FERRO-ALLOYS,1993-94

Metal /Alloy	Unit	Production			% Share of	
		Total	Private	Public	Private	Public
1.Non-ferrous metals						
Aluminium	tonne	463,424	177,290	286,194	37	63
Cadmium	"	249	42	207	17	83
Copper						
Blister	"	37,160	-	37,160	-	100
Elec.wire bar	"	21,238	-	21,238	-	100
Fire-refined	"	21,673	-	21,673	-	100
Gold	Kg	2,075	-	2,075	-	100
Lead						
Primary	tonne	25,299	-	25,299	-	100
Secondary	"	11,359	11,359	-	100	-
Selenium	kg.	11,116	-	11,116	-	100
Silver	kg.	56,096	-	56,096	-	100
Tin	kg	76,255		76,255	-	100
Zinc Ingot	tonne	143,961	24,082	119,879	17	83
2. Ferrous Metals						
Finished steel	t.tonne	15,126	7,330	7,796	48	52
Semi-finished		4,209	N.A	NA	-	-
Steel						
Steel ingot	"	16,451	5,264	11,187	32	68
Pig iron	"	16,273	2,929	13,344	18	82
Sponge iron	"	2,420	2,145	275	89	11
Chromium	kg.					

(Contd.)

Table-11 : (Concld.)

Metals/Alloys	Unit	Production			% Share of	
		Total	Private	Public	Private	Public
3. Ferro-Alloys						
Ferro-Aluminium	tonne	167	167	-	100	-
Ferro-Boron	"	4	4	-	100	-
Ferro-Chrome	"	96,753	90,814	5,939	94	6
Ferro-Manganese	"	169,315	122,517	46,798	72	28
Ferro-Molybdenum	"	236	236	-	100	-
Niobium	"	2	2	-	100	-
Ferro-Silicon	"	80,367	65,236	15,131	81	19
Ferro-Silicon	"	22	22	-	100	-
Ferro-Titanium	"	266	266	-	100	-
Ferro-Tungsten	"	50	50	-	100	-
Ferro-Vanadium	"	191	191	-	100	-
Silicon Metal	"	671	671	-	100	-
Silico-Chrome	"	3,987	3,987	-	100	-
Silico-Manganese	"	94,575	87,493	7,082	93	7
Charge-Chrome	"	116,905	116,905	-	100	-
Ferro-Manganese	"	4	4	-	100	-
Boron	"	–	–	–	–	–

Note :- Coverage is to the extent available with IBM.