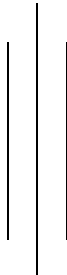


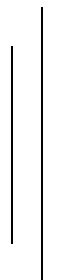
MINING IN RAJASTHAN

A STUDY



• MADAN MODI •

• SOHINI SENGUPTA •



• PUBLISHER •

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COURTESY-OXFAM (INDIA) TRUST, AHMEDABAD

Mining in Rajasthan

Dear friends!

Namaste! Greetings!!

The scenario of stone, marble and soapstone mining in Rajasthan shows very clearly the rule of lawlessness, the Jungle Raj. Here might is right, the dignity of man and the sanctity of tribal culture and social life is under attack. It is disintegrating gradually.

The rule of law doesn't exist here. The mines owners don't care for laws. Money buys all. They have an army of ruffians at their command to shut down the voice of those who raise questions. Nobody dares say anything against them since the muscle power can set them right just on a hint. They also enjoy the patronage of the state. Many of the people in power and their relatives are running these mines.

The constitutional and human rights are completely thwarted. The ecology is disturbed, is being deformed and debased by uncontrolled mining and explosions. The agriculture, pastures and water resources are destroyed and this destruction is spreading fast.

The officer of mines safety and promotion officers of the central labour ministry bow down to the mining mafia. They shirk their responsibilities by complaining of a large area and lack of adequate staff. Infact, they are hands in gloves with the Mafia. Worse still, when somebody approaches them with a complaint, they threaten him and frame lame excuses for not taking any action. In such a state the Jungle raj, a state of lawlessness, is flourishing.

I am writing this letter to you with immense hope and faith. With this hope that you shall consider the entire issue seriously, find time to go through the material related to the subject and please guide us as well as, to the future course of action we should adopt.

I expect full sensitivity and cooperation on this issue.

April 1, 1998

Madan Modi
President
SASUMASU

SOURCES OF INFORMATION

1. Investigation and field study done by SASUMASU, 426/4, Hiran Magri, Udaipur-313002
2. Directorate of Mines & Geology, Udaipur
3. Resource Atlas of Rajasthan.

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The Pitiful state of Mine's Labour in Rajasthan

- Madan Modi

Rajasthan is rich in mineral deposits. In a way, this is the biggest museum of mineral wealth in the country. Though in terms of mining it is at the second place in the country, but the chances of it's reaching the top position are emerging. Sixty-five kinds of mineral deposits are there in this state. Twenty percent of the major minerals mines and 50 percent of the minor mineral mines are operational at present in the state. Out of this only one percent mines are there in the government or semi-government sector, rest 99 percent mines are in the private sector. It is unfortunate that in 97 percent of the mines unscientific and uncontrolled mining is going on which has caused the destruction of mineral wealth at the same time made mining hazardous. Twenty percent mines are unsafe and an accident may occur any day.

3/5th of the 3,42,239 sq km of the land of Rajasthan is desert. Maximum mineral deposits are in the Aravalli range. A total of 60,506 sq km area is under the forestland, 154,29 lakh hectare is agricultural, forest and pastureland is being destroyed. A talk of alternate forestry is in the air but the efforts to develop alternative forests are meager. At present there are 33,199 mines of various sizes spread in 4-lakh hectare land in which mining is going on. The state government is earning direct revenue of Rs. 271 crores and a larger amount per year as indirect revenue from these mines.

About 18 lakh people are employed in mines and allied industry as labourers. Though the government data give a number of 4 lakh people only but that information is not reliable because in government records most of the mines and mill owners give a very small number of labourers in order to evade labour laws and other restrictions. They do not write the real names of the labourers and keep them changing so that no labour can claim permanent appointment. These mine labourers are awefully exploited by the contractors, mines owners and capitalists. They are not given minimum wages nor any other facility. Even after doing hard labour they are deprived of even the basic human requirements and are leading a hell-like life. There is no arrangement of their treatment in the case of accident. They are not given any compensation as they are not permanent workers. The mine owners shirk all responsibility in the case of accident. There is no arrangement for sitting. They have to live in open, under a tree or by constructing a hut themselves. Many times the behaviour of contractors and their colleagues with the female labourers is shameful.

Out of the eighteen lakh people employed in mines and stone industry 15% are children who have to work in extremely pitiful and hazardous conditions. Out of these 22 thousand children belong to 10-12 years of age who are working in different mines removing debris. They are given a paltry wage of not more than 10-12 rupees a day. Sometimes the contractors deduct a large sum of even this and deny them any money. The 37 percent of mine labourers consist of women.

Generally the child labourers get 10-15 rupees a day and the male labourers (men) get 30-40 rupees a day. The contractor often commits bungling in wage distribution and sometimes takes the money from the mine owners but flies away without paying the labourers. Several mine owners have converted labour into bonded labour by giving them advance for unproductive expenditure, which they fail to repay. Their number is about two lakh. They are given the most brutal treatment.

Generally a labour beyond 40 years of age is not employed in a mine because the mine owner considers him useless. People in the age group of 10-35 years are employed so that maximum work can be taken from them. It is observed that a man who has worked for five years in mines becomes a victim of one or the other disease of lungs.

Most of the mining operations are being conducted unscientifically which affects the environment as well as puts the lives of the labourers in danger. If we look at the average of last five years, every year more than two hundreds labourers are killed in 375 mine accidents and 335 people get injured. Some of the labourers become permanently handicapped. But till today not even one percent of the dead or injured have been given adequate compensation. The families of the dead or injured are made quiet by offering a paltry sum because they are poor, powerless and unorganized. In all such cases the mines owner is in fault because they are making the labourers work in an unscientific manner, uncontrolled just in order to earn larger profit in less time. Children are employed in such hazardous work, which is illegal. But the police have not taken a foolproof action in any case and not a single mine owner has been arrested so far. What is the mystery behind the silence of police, Mines department and the department of labour? This number of the casualties in mine accidents is a sum total of accidents reported in the newspapers from time to time. But there are many accidents, which took place in remote areas and were never reported. The number of such accidents and the casualties are besides the data mentioned above. But the question is whether the police, department of mines and labour took any action even after the accident having been reported in the newspapers. If not, why?

Twenty percent of the mines in the state have become unsafe due to uncontrolled and unscientific mining. Any day a big calamity may take place, but nobody bothers. Leaving one or two exceptions no mine has even a “first aid box” for emergency treatment. The mines labourers are suffering from T.B., Cancer, diseases related to lungs, Aids, Silicosis etc. but there is no arrangement for examination of their health.

Even the basic human requirements are not available in the mines. Even a week old vegetables and spoiled flour are available at a high price. They have to stay under the open sky or in very small huts made up by placing tin sheets on stone pillars just two and half feet high. Irrespective of cold or hot weather, this is the only shelter available in which they can enter only in a sitting posture. The inner space is also insufficient. Marginal difference may exist between different

mines but the harrowing situation, in general, is the same. The conditions related to health and safety are a bit more or less hazardous in marble, Limestone, Soapstone but the risk to life and health is not very different.

90% of the workers in mines are tribals or people belonging to the Scheduled castes, who have reached the mines after wandering here and there in search of employment leaving their homes long back. But most of these become victims of one or the other disease and die, women lose their honour, and children have no dreams for future but to quench their daily hunger. The organizations of the mines owners and even the state government have united to oppose the notification related to environment, which has forced the closure of several mines. They have started clamouring in the name of labourers but do they ever listen to the pitiful lament of these victims of exploitation in the mines who are forced to lead an inhuman existence?

The Aravalli hills run through the South South-East Region of Rajasthan and extend up to Delhi in the North. Thus it acts as a natural barrier against the Thar desert lying on its West. It checks the expansion of this desert. The uncontrolled mining activity cutting hills from their very roots will certainly open the gate to this ever-widening desert and lead to an irrevocable process of desertification of the entire state of Rajasthan. Crores of rupees spent through CAZRI and other agencies to check its expansion will go waste.

Aravallis were once covered with dense forest. Even now the only region where some kind of a forest is saved lies in this belt. A large number of different species of plants and animals will be lost if they are not saved. This forest checks the ecological balance, rainfall and the average temperature. If indiscriminate mining is allowed a new rocky desert will be created out of mining wasteland. The Government organizations and the NGOS have spent more than Rs. 5000 crores for forestation in the region and another Rs. 200 crores are given by the Government of Japan for the same purpose. Uncontrolled mining will defeat the efforts going on in this direction.

The catchment area for major rivers in Rajasthan, drainage and river-systems lie in this region which not only affect the ecology in Rajasthan but also the neighbouring state of Uttar Pradesh and Gujarat.

The Aravalli region embowers ninety eight percent of the total tribal population of the state. The tribals represent the poorest of the poor, most exploited class of people who were drawn to live on the slopes of the hills of the Aravalli. They were once the masters of the forest but now have been turned into wage labourers, with a male literacy rate of 7-10% and a female literacy rate of 1-3%. Uncontrolled mining will not only destroy the forest but also threaten the life, culture and social milieu of the tribals about whom the state and the 'civilised' authorities are never tired of shedding crocodile tears and paying lip sympathy.

The greed for the revenue from minerals, which are richly deposited in this belt will ultimately be a slaughter of the human beings, wild life and NATUPE as a whole. The debate is about ethics-What is important- MONEY or-MAN?

The blessing of nature in the form of mineral deposits, forests, rivers, ponds etc. should not be allowed to be turned into a curse for the people who inhabit this land.

Rajasthan's mine fields are virtually the death fields for millions of mine workers. In various fatal accidents rising continuously and alarmingly, hundreds of workers are being killed every year in the state. The new State Mineral Policy 1994, with its exclusive emphasis on exploiting the vast mineral wealth in a free and liberal environment, has further thrown the working conditions of mine workers in peril. Various government departments, central and state, concerned with the welfare of mine workers, seem to have lost their relevance in the mine fields today.

Mining is not only creating havoc with regard to natural resources-pastures, forests, water courses, watersheds, cultivated lands and livestock--but is also killing a large number of mine workers. Serious accidents are such a regular happening in all these mining areas that one can call them as one of the worst and most unsafe mining areas of the country.

The Government records suggest that there are 6 lakh people employed in various mines of the state. But this number is widely contested by, trade unions, voluntary organizations and researchers. Mine Labour Protection Campaign, a body comprising of many organizations and researchers, estimates that over 1.8 million workers are engaged in a variety of mining operations throughout the state. 15% of these total workers are children. 22,000 of them are between the age group of 10-12 years. And 37% are women. The scheduled castes and tribes form the majority of the work force. Over 95% of the mines in the state are mined in an uncontrolled and unscientific manner, in the most primitive way.

Mine workers complain and government officials confirm that in all these mines, workers have no written records of their employment. They are either working as contract labourers or daily wage workers. There are no health schemes, group insurance, E.S.L, P.F., gratuity, bonus or pension for them. The laws regarding minimum wages, overtime, welfare, health and safety do not exist here. Even in case of serious accidents, deaths and injuries, no compensation is given normally. Not a single legal case for compensation or for providing any other facility to which the workers are entitled, has ever been made or filed in any of the courts. Not a single case of silicosis or any other occupational disease has ever been officially acknowledged. Where the workers died, some small amount has been given to workers' families, and many-a-times, not even that.

Mines of Misery

Destruction of Resources	Change in Ecology	Threat to life and health
<ul style="list-style-type: none"> • Destruction of forest land • Destruction of pastures • Destruction of agricultural land. • Destruction of water resources. 	<ul style="list-style-type: none"> • Destruction of the fertility level of soil • Air Pollution • Sound Pollution • Water Pollution • Extension of the desert due to destruction of Aravallis, which worked as a wall to check it. • Conversion of Aravallis into craggy desert. • Steep rise in temperature in last 17 years with increasing mining activity (seventeen years ago the maximum temperature of Udaipur varied between 30 to 35⁰ C but now it has exceeded 48⁰ C). 	<ul style="list-style-type: none"> • Increasing dependence on labour due to weakening and destruction of people's resources. • Economic exploitation (Non-Payment of Complete wages) • Health deteriorated, disease, increased. • Mining labour-victims of diseases related to lungs, Blood Pressure, Blindness, Skin diseases, T.B., etc. • Increase in accidents (Death and handicapped). • Migration of wild animals. • Fodder crisis. • Shortage of food for man. • Water resources going dry. • Destruction of the culture of regional population. • Rehabilitation problem of the inhabitants of land under mining. • Decrease in forest products like fire wood, herbal medicines, etc.

Accidents reported during Mining
January 1st, 1991 and December 31st, 1995

	Mining Area	Accidents	Died	Injured
1.	Udaipur	268	114	186
2.	Rajsamand	291	133	241
3.	Dungarpur	132	57	224
4.	Banswara	104	26	109
5.	Chittorgarh and Bhilwara	157	72	166
6.	Makrana (Nagore)	579	416	288
7.	Jodhpur	107	62	171
8.	Ajmer	29	17	54
9.	Jaipur	92	41	92
10.	Alwar and Sawai Madhopur	117	76	146
	Total	1876	1041	1677

	In Mine accidents	Died	Injured
Men		616	1171
Women		292	319
Children {below 16 year}		106	187

Note: These data about Mining accidents have been collected from the newspaper reports published in Rajasthan. There may be several more accidents, which could never reach the news desks.

Average Daily Wages of Mine Labourers

Mining Area	Male Labour (In Rs.)	Female Labour (In Rs.)	Child Labour (In Rs.)
Udaipur	30.00	25.00	13.50
Rajsamand	30.00	22.00	13.00
Dungarpur	28.00	20.00	12.00
Banswara	29.00	20.00	12.00
Makrana	40.00	25.00	15.00
Jodhpur	50.00	30.00	20.00
<i>(Advance system is prevalent in this region and those who take advance are paid only 15-20 Rs. daily)</i>			
Ajmer	30.00	25.00	15.00
Jaipur	35.00	25.00	13.50
Jamuva Ramgarh	25.00	18.00	11.00
Alwar	45.00	28.00	18.00
Chittorgarh	35.00	25.00	15.00
<i>(Advance system is prevalent here also and a majority of labour get turned bonded labour as a consequence.)</i>			
Barmer	24.00	16.00	16.00

Note: The advance taken by the labourers is spent in unproductive works like marriage and funeral feast. Hence its repayment becomes difficult and the labourer turns into a bonded labourer.

In 1996-97 the Department of Mines and Geology, Government of Rajasthan has earned a total revenue of Rs. 270 crores and 63 lacs from mining which is 28% more than the revenue in 1995-96.

The revenue earned district wise is as under: -

S. No.	District	Income (In lac Rs.)
1.	Ajmer	955.63
2.	Alwar	400.67
3.	Bundi	625.34
4.	Bharatpur	149.46
5.	Bikaner, Churu	412.92
6.	Dholpur	152.70
7.	Jodhpur	1151.21
8.	Jaipur-Dausa	838.92
9.	Sawai Madhopur	361.01
10.	Nagore	1566.34
11.	Sikar	210.53
12.	Jhunjhunu	342.17
13.	Kota-Baran	1233.73
14.	Barmer	132.12
15.	Jhalawar	84.41
16.	Jaisalmer	666.30
17.	Jalore	120.80
18.	Pali	377.32
19.	Shri Ganganagar, Hanumangarh	525.11
20.	Tonk	158.55
21.	Directorate	27.12
District of Southern Rajasthan		
22.	Bhilwara	2967.48
23.	Chittorgarh	3275.65
24.	Rajsamand	2038.15
25.	Sirohi	1037.90
26.	Udaipur	3018.30
27.	Banswara	304.32
28.	Dungarpur	173.16
Total		23306.22
Gypsum development fee		701.22
Rock Phosphate (Udaipur)		674.00
Sanu Lime Stone		2382.15
Total		27063.59

Half of the total revenue from mining, which is about Rs. 134 crore 88 lacs and 96 thousand comes from south Rajasthan.

**Data presented by the department of Mine and Geology in the Legislatle
Anembly of Rajasthan**

Production of major Minerals, sale price and the average number of labour 1995-96

S. No.	Name of Mineral	Unit	Produce	Sale Price (In Thousand Rs.)	Av. Number of labour
<u>Metallic Minerals</u>					
1.	Copper ore	Thousand tonne	1577.80	497007.00	7195
2.	Iron ore	-''-	59.03	4290.06	160
3.	Lead Zinc and Silver				
	a) Ore	Thousand tonne	2233.33		
	b) Lead concentrate	Thousand tonne	45.56	1140345.00	11827
	c) Zinc concentrate	Thousand tonne	276.18		
	d) Silver	Kg.	31256.00	187536.00	
	e) Gold	Kg.	210.07		
4.	Manganese ore				
5.	Tungston				
<u>Non-Metallic Minerals</u>					
6.	Amethist				
7.	Aquamarine				
8.	Asbestos	Thousand tonne	20.69	3365.22	737
9.	Balclay	Thousand tonne	306.87	22951.23	462
10.	Barieties	Thousand tonne	3.25	2106.00	136
11.	Calcite	Thousand tonne	75.89	22575.73	752
12.	Chalk	Thousand tonne	10.00	1.50	5
13.	China clay/white clay	Tonne	433.00	38634.21	1218
14.	Corundum	-	-	-	-
15.	Dolomite	Thousand tonne	17.04	1377.52	146
16.	Amerald	Kg.	3.81	22860.00	25
17.	Apedote	Kg.	400.00	0.01	10
18.	Phelspar	Thousand tonne	71.06	9160.94	419
19.	Fireclay	Thousand tonne	45.15	3394.70	248
20.	Florite	Thousand tonne	1.69	3650.00	228
21.	Gornet (Gem)	Kg.	585.00	73.12	
	(Abrassive)	Tonne	216.00	216.00	45
22.	Graphite	Thousand tonne	4.60	230.00	50
23.	Gypsum	Thousand tonne	2042.08	240686.00	2162
24.	Gespar	Tonne	5.37	1935.75	113
25.	Kainite	Tonne	10.00	3.50	11
26.	Laterite	Thousand tonne	18.44	549.00	27
27.	Limestone	Thousand tonne	11898.94	789317.93	5970
28.	Magnasite	Tonne	10.00	0.25	1
29.	Mica	Tonne	67.84	70.17	224
30.	Oakers	Thousand tonne	385.32	13712.28	306
31.	Pyroflite	Thousand tonne	6.97	453.32	101
32.	Quarty	Thousand tonne	105.18	11550.46	710
33.	Red oxide	-	-	-	-
34.	Rock phosphate	Thousand tonne	900.87	630105.60	3932

35.	Salasite	Thousand tonne	11.69	4546.08	403
36.	Shell	Tonne	200.00	20.00	4
37.	Silica Sand	Thousand tonne	234.75	31372.57	908
38.	Siliceous Earth	Thousand tonne	7.08	1004.42	340
39.	Siliminite	-	-	-	-
40.	Silate Stone	-	-	-	-
41.	Soapstone	Thousand tonne	794.72	145883.42	10115
42.	Sulphur ore	-	-	-	-
43.	Volertonite	Thousand tonne	93.64	62964.24	1925
44.	Lignite	Thousand tonne	62.10	34465.50	250
45.	Oil and Gas	-	-	-	-
46.	Vermiculite	Tonne	80.00	14.00	150
Total				3928428.82	51,342

Production and Sale Price of Minor Minerals 1995-96

S. No.	Mineral	Production (In Thousand Rs.)	Sale Price (In Thousand Rs.)	Average Number of Lobular
1.	Bentonite	54.46	6008.60	105
2.	Brick Earth	4235.84	507711.42	12116
3.	Chert	1.21	166.63	69
4.	Chips and Chips Powder	59.40	7424.00	3976
5.	Fullers Earth	14.88	1476.00	104
6.	Granite	55.26	78405.33	5461
7.	Pebbler	6837.93	182990.27	21454
8.	Lime Pebbles	21.34	920.37	107
9.	Limestone (Burning)	3733.30	312925.96	20577
10.	Limestone (Building)	1760.05	1051323.60	15527
11.	Marble (Block)	2395.14		
	(Pieces)	445.66	3011805.00	73319
12.	Masonry Stone	15408.45	406595.13	86363
13.	Mill stone	2.80	696.00	50
14.	Murram	485.23	11255.29	1097
15.	Patti Katla	11.05	658.44	2144
16.	Quartzite	1.92	75.16	429
17.	Royolite	179.37	14548.00	258
18.	Saltpeter	4.79	28740.00	900
19.	Sandstone	3295.72	1046960.99	78074
20.	Slate Stone	6.35	28740.00	1002
21.	Serpentine	183.96	1046960.99	54384
	Total		209.90	328570
	Grand Total		308426.00	3,79,912

Note: The data of the number of labour is the official data provided to the government by the mine owners in various forms. But this is generally not correct. Generally the mine owners try to show the minimum number of labour in order to evade various labour laws. This number includes only permanent labourers. There are labourers many times than this number who are farmers too. They work on the mines for eight months and go to their homes for four months in parts. Non-government surveys report that there are some 18 lakh labourers in mining sector.

Circle wise & office wise number of leases in force for the year 1993-94

S. No.	Name of circle & office	Major (M.L.)			P.L.			Minor (M.L.)			Quarry Licence		
		Total	S.C.	S.T.	Total	S.C.	S.T.	Total	S.C.	S.T.	Total	S.C.	S.T.
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.
(A)	S.M.E. Bharatpur												
	1. M.E. Alwar	33	-	-	-	-	-	698	-	-	-	-	-
	2. M.E. Bharatpur	25	2	2	-	-	-	377	16	14	-	-	-
	3. M.E. Dholpur	-	-	-	-	-	-	179	69	9	27	16	9
	4. M.E. Karouli	50	-	-	4	-	-	232	4	17	-	-	-
	5. A.M.E. Sawai Madhopur	16	-	-	22	-	-	104	17	11	-	-	-
	Total	124	2	2	26	-	-	1590	46	51	27	16	9
(B)	S.M.E. Bikaner												
	6. M.E. Bikaner	82	1	-	4	-	-	198	20	-	35	-	-
	7. M.E. Nagour	12	-	-	1	-	-	177	21	-	197	24	10
	8. AME Jaisalmer	14	-	-	5	-	-	105	-	-	-	-	-
	9. AME Shri Ganganagar	11	1	1	1	1	1	215	2	-	-	-	-
	Total	119	1	-	10	-	-	695	43	-	232	24	10
(C)	S.M.E. Bhilwara												
	10. M. Bhilwara	120	-	-	13	-	-	261	27	8	89	6	21
	11. M.E. Chittorgarh	22	1	-	7	-	-	24	-	-	969	104	30
	12. A.M.E. Bijolia	4	-	-	-	-	-	8	-	-	6123	-	-
	13. A.M.E. Nimbahera	32	1	-	3	-	-	35	-	1	1214	201	104
	Total	178	2	-	23	-	-	328	27	9	8395	311	155
(D)	S.M.E. Jaipur												
	14. M.E. Ajmer	214	-	-	26	-	-	285	-	-	49	15	10
	15. M.E. Jaipur	96	1	-	4	-	-	576	27	26	190	49	46
	16. M.E. Makrana	-	-	-	-	-	-	36	6	-	715	51	-
	17. M.E. Neem Ka Thana	80	-	-	4	-	-	306	16	5	-	-	-
	18. A.M.E. Tonk	24	-	-	19	2	-	120	12	3	175	74	23
	Total	414	1	-	53	2	-	1323	61	34	1129	189	79

(E)	S.M.E. Jodhpur												
	19. M.E. Jodhpur	27	-	-	2	-	-	220	12	1	6423	2125	235
	20. M.E. Sirohi	19	-	-	-	-	-	354	14	17	54	3	1
	21. A.M.E. Balesar	-	-	-	-	-	-	58	4	-	2415	3	25
	22. A.M.E. Barmer	14	-	-	2	-	-	213	27	12	-	-	-
	23. A.M.E. Sojat City	35	-	-	19	-	-	194	10	2	236	40	9
	Total	95	-	-	23	-	-	1039	67	32	9128	2171	270
(F)	S.M.E. Kota												
	24. M.E. Kota	4	-	-	-	-	-	239	14	18	-	-	-
	25. M.E. Bundi-I	-	-	-	-	-	-	688	65	21	-	-	-
	26. M.E. Bundi-II	4	-	-	-	-	-	942	-	-	-	-	-
	27. M.E. Ramganjmandi	1	-	-	-	-	-	126	-	-	-	-	-
	28. A.M.E. Jhalawar	1	-	-	-	-	-	195	19	18	-	-	-
	Total	10	-	-	-	-	-	2190	98	57	-	-	-
(G)	S.M.E. Udaipur												
	29. M.E. Udaipur	119	-	-	13	-	-	415	7	8	41	1	8
	30. M.E. Rajsamand-I	69	-	-	2	-	-	1361	41	18	-	-	-
	31. M.E. Rajsamand-II	31	-	-	5	-	-	423	-	-	-	-	15
	32. A.M.E. Banswara	10	-	-	2	-	-	228	-	2	15	-	15
	33. A.M.E. Dungarpur	132	3	-	13	-	-	504	46	5	203	132	-
	Total	361	3	-	35	-	-	2931	94	33	259	133	23
	Grand Total	1301	9	2	170	2	-	10096	436	216	19170	2844	546

Number of Effective Mine-Lease Owners in Rajasthan 1996-97

S. No.	Name of Office	No. of Major Mineral Leases	No. of Minor Minerals Lease
1.	<u>Bharatpur Circle</u>		
	M.E. Alwar	28	544
	M.E. Bharatpur	25	313
	M.E. Dholpur	-	150
	M.E. Sawai Madhopur	13	100
	M.E. Karauli	42	187
	Total	108	1294
2.	<u>Jaipur Circle</u>		
	M.E. Ajmer	215	344
	M.E. Jaipur	76	497
	AME Kot-Putli	22	108
	M.E. Makrana	-	31
	M.E. Neem Ka Thana	80	272
	A.M.E. Tonk	27	87
	Total	420	1339
3.	<u>Kota Circle</u>		
	M.E. Kota	4	164
	M.E. Ramganj Mandi	1	324
	M.E. Bundi I	-	340
	M.E. Bundi II	-	324
	M.E. Bundi III	4	589
	A.M.E. Jhalawar	1	180
	Total	126	1921
4.	<u>Bikaner Circle</u>		
	M.E. Bikaner	89	212
	M.E. Nagore	7	140
	A.M.E. Gotan	6	33
	A.M.E. Jaisalmer	13	153
	A.M.E. Shri Ganganagar	11	280
	Total	126	818
5.	<u>Jodhpur</u>		
	M.E. Jodhpur	25	268
	A.M.E. Balesar	-	54
	M.E. Sirohi	14	200

A.M.E. Barmer	14	148
A.M.E. Sojat City	37	227
A.M.E. Jalore	6	312
Total	96	1209

6. **Bhilwara Circle**

M.E. Bhilwara	116	244
M.E. Bijolia	6	-
M.E. Chittorgarh	21	17
A.M.E. Nimbahera	31	29
Total	174	290

7. **Udaipur Circle**

M.E. Udaipur	82	327
M.E. Kherwara	54	260
A.M.E. Salumber	42	138
M.E. Rajsamand-I	68	1397
M.E. Rajsamand-II	32	414
A.M.E. Banswara	10	236
A.M.E. Dungarpur	78	207
Total	366	2969
Grand Total	1300	9840

Total Mining Leases Major Minerals	1,300
Total Mining Leases Minor Minerals	9,840
Total Quarry Licences	22,059
Grand Total all types of Mines	33,199

Details of Mines Leases allotted to SC and ST People

Type of Mine Lease	Scheduled Caste	Scheduled Tribe
Major Minerals	4	4
Minor Minerals	329	250
Quarry Licences	4695	2215

Note: *It is worth nothing that most of the mines allotted to SC & ST People are being run by other people. They are simply working as employees.*

No. of leases (Major Minerals) for the year 1995-96

S. No.	Mineral	No. of Leases	Area (Hect.)
<u>Metallic Minerals:</u>			
1.	Cooper ore	6	2240.65
2.	Iron ore	16	1554.86
3.	Lead, zinc & silver	6	8282.76
4.	Magnese ore	1	80.00
5.	Tungsten	1	200.17
<u>Non-Metallic Minerals:</u>			
6.	Amethyst	1	75.00
7.	Aquamarine	1	58.02
8.	Asbestos	65	6360.13
9.	Ball clay	50	4997.01
10.	Barites	11	856.26
11.	Calcite	31	2185.48
12.	Chalk	1	57.36
13.	China	76	7196.65
	Clay/white clay		
14.	Corundum	1	77.85
15.	Dolomite	10	927.78
16.	Emerald	3	167.25
17.	Epidote	1	46.68
18.	Felspar	98	5867.79
19.	Fire clay	23	2284.39
20.	Fluorite	18	3328.13
21.	Farnet	9	439.66
22.	Graphite	2	382.75
23.	Gypsum	35	19741.13
24.	Jasper	25	1412.96
25.	Kyanite	1	144.00
26.	Laterite	1	481.70
27.	Limestone	42	22669.34
28.	Magnesite	1	60.00
29.	Mica	190	9296.30
30.	Ochres	19	1800.39
31.	Phrophyllite	13	624.68
32.	Quartz	81	6312.56
33.	Red oxide	1	69.06
34.	Rock phosphate	8	3289.61
35.	Selenite	4	1062.61

36.	Shale	1	33.00
37.	Silica sand	96	8466.97
38.	Siliceous Earth	7	1279.80
39.	Sill emanite	-	-
40.	Slate stone	-	-
41.	Soapstone	334	30640.65
42.	Sulphur ore	1	200.00
43.	Wollestonite	5	437.26
44.	Lignite	2	3515.70
45.	Oil & Gas	-	-
46.	Vermiculite	2	107.00
	Total	1300	159311.89

Number of Leases & Area of Minor Mineral in Rajasthan
(As on 31.03.1993)

S. No.	Mineral	Lease	Area in Hectares
1.	Aslet	1	2.00
2.	Bajri	15	18.00
3.	Bentonite	14	803.00
4.	Brick Earth	469	5090.00
5.	Chert	24	13.00
6.	Fuller's Earth	17	53.00
7.	Granite	877	7657.00
8.	Lime Kankar (Jhanjara Kankar)	18	13.00
9.	Limestone (Burning)	564	18384.00
10.	Limestone (Building)	147	1546.00
11.	Marble	3689	4322.00
12.	Masonry Stone	1948	4044.00
13.	Mill Stone	49	1001.00
14.	Murram	1	1.00
15.	Patti Katla	10	98.00
16.	Phyllite/Schist	33	33.00
17.	Quartzite	12	7.00
18.	Rhyolite	68	99.00
19.	Salt Petre	6	4.00
20.	Sand Stone	2363	41843.00
21.	Serpentine	496	496.00
22.	Shale	-	-
23.	Slate Stone	30	109.00
Total		10851	81055.00

Minor Minerals

S. No.	Minerals	All India Position
1.	Marble (Block), Chips & Powder	I
2.	Serpentine	I
3.	Sand Stone	I
4.	Limestone (Flaggy)	II
5.	Bentonite	II

Mineral Production in Rajasthan Percentage Contribution

Mineral	% of India's Production
Wollastonite	100
Jasper	100
Zinc concentrate	99
Fluorite	96
Gypsum	93
Marble	90
Asbestos	89
Soapstone	87
Lead concentrate	80
Phosphate rock	75
Ball clay	71
Calcite	70
Sandstone	70
Flaggy limestone	70
Felspar	70

Important Minerals Produced in Rajasthan Major Minerals

S. No.	Minerals	All India Position
1.	Lead-Zinc Ore	I
2.	Tungesten Ore	I
3.	Phosphorite	I
4.	Asbestos	I
5.	Calcite	I
6.	Kaolin	I
7.	Felspar	I
8.	Garnet (Germ)	I
9.	Gypsum	I
10.	Jasper	I (Exclusive)
11.	Silver Ore	I
12.	Steatite (Soapstone)	I
13.	Wollastonite	I (Exclusive)
14.	Fluorite	I
15.	Ochre	I
16.	Garnet (Abrasive)	II
17.	Silica Sand	II
18.	Copper Ore	II
19.	Barytes	II
20.	Limestone	III
21.	Vermiculite	III
22.	Mica	III
23.	Pyrophyllite	III
24.	Quartz	IV
25.	Slate	IV
26.	Fire Clay	IV
27.	Magnesite	IV

Important Mineral Based Industries

S. No.	Minerals/Metals	Industries
(i)	Copper	Wire drawing, foundry.
(ii)	Lead	White lead and chrome lead, storage batteries
(iii)	Zinc	Zinc oxide, Zinc sulphate.
(iv)	Cement grade limestone	Cement.
(v)	Chemical grade limestone	Calcium ammonium nitrate, Calcium carbide, Precipitated Calcium carbonate, Hydrate lime.
(vi)	Rock phosphate	Single super phosphate, Triple super phosphate, Di-ammonium phosphate, Phosphoric acid, Elemental phosphorus.
(vii)	China clay	Ceramic.
(viii)	Ball clay	Ceramic.
(ix)	Fire clay	Refractories.
(x)	Calcite	Glazed tiles.
(xi)	Mica	Built up mica, Wet ground mica powder, Dry ground mica.
(xii)	Quartz and silica	Bottles and vials, Glass lamps and Fluorescent tubes.
(xiii)	Bentonite and Fuller's earth	Pulverising units, Activation units.
(xiv)	Soapstone	Insecticides, Cosmetics, Micronizing units.
(xv)	Gypsum	Plaster of Paris, Gypsum, Micronizing units.
(xvi)	Fluorspar	Cryolite, Hydro-fluoric acid.
(xvii)	Garnet	Abrasives, Cutting and Polishing.
(xviii)	Lignite	Briquetting, Liquid lignite.
(xix)	Potash	Murate of Potash.
(xx)	Granite, Marble	Processing units.

Attempt to drop ban on Asbestos mining

Mr. N.S. Bohara, Director, Mines and Geology made a strong worded demand to remove ban on Asbestos mining in a meeting of State Geologist's programme Board on 7th June 1997. Presided over by the state secretary of mines Mr. S.P. Gupta. The state government is considering this seriously and it is likely that the ban is done away with. The mining of Asbestos stealthily is going on even today.

Several labourers working in Asbestos mines have died, hundreds of them have become victims of T.B. and are permanently handicapped and thousands of families completely destroyed. As a result the mining of Asbestos, disastrous to human health was banned. But once again, the government, in its greed, is planning to begin its mining. Such a kind of mining at the cost of human life is neither desirable nor humane.

Gold in Banswara

In the Khamera-Undwala region of Banswara 205 meter drilling was done by two boreholes last year. The chemical analysis of samples taken from borehole number 3 revealed the existence of 3 grams of gold per tonne at a depth of 170 to 170.5 meters and 1 to 8 grams of gold per tonne at a depth of 172.5 to 182.3 meters.

Contract to Multinational Companies

Two years back when the Bhartiya Janata Party was bearing the flag of opposition on the issue of the withdrawal of contract from Anron company given earlier to run the Dabhol Electricity Project, even then, the Chief Minister of Rajasthan gave away the contract to Anron for establishing a solar energy Chimney in Jaisalmer betraying his love for Multinational Companies.

In a similar move the C.M. has given a contract to a Multinational company for mineral mining putting aside the claims of Indian companies.

Mining lease for Copper, Lead, Zinc, Gold and Silver has been issued to B.H.P. Mineral India (Ltd.), an Australian company in 2532.14 square kilometers in the district of Tonk, Ajmer, Bundi and Bhilwara, in 2637.58 square kilometers in the district of Bundi, Tonk and Sawai Madhopur, in 2305.64 square kilometers in the district of Jaipur, Tonk and Sawai Madhopur, in 983.87 square kilometers in Bhilwara and in 1915.52 square kilometers in the district of Ajmer and Kishangarh respectively.

For mining of Gold in Jagpura region of Banswara district an agreement has been signed with New Gini Mining Company of Australia.

The contract for Mining of Nickel, Tungsten and Tin in Rajasthan to be given to B.H.P. Minerals of Australia is in the pipeline.

Memorandum of understanding has been signed with Advance Mining Works Company of Sudan (Africa), Pelligrini Company of Verona (Italy), Metedist Ltd. of U.K., Alvin David of Sidney (Australia) and some more Multinational companies for mining stones as well as precious metals.

Thousands of square kilometers of land is being allotted to these companies which cover forest land, pastures, village land as well as hundreds of acres of cultivated land. Several villages fall within this area and they shall have to be evacuated. The entire Aravalli region seems to have been allotted.

Mining in Pastures

The state government has waived the condition of taking the permission of the district collector and revenue department before starting survey for mining in the pastureland. No NOC will be required for this now.

The state government has authorized the district collector to allot pastureland up to four hectares to the leaseholders. Permission for land exceeding this limit shall be given by the revenue department. Thus the right of villages on their pastures has been snatched away if the land has mineral deposits.

It is noteworthy that there won't be a single village in the Aravalli region which doesn't have mineral deposits of one kind or the other.

Allotment of Mining Lease defying court orders

Mining Engineer, block 2 of Bundi district has issued mining lease for pastures in the village Gopalpura under the Patwar circle Budhpura defying the order of the court to maintain status quo. A complain to this effect has been made by the villagers in a memorandum sent to the Chief Minister, Mining Minister, District Collector of Bundu and the Chairman, Human Rights Commission.

The memorandum states that the land under Khasara No. 431, 435, 436 Kha, 443 and 444 measuring 298 Bigha 3 Biswa is registered in revenue record account No. 1 as pastureland. The right to use this land lies in the villagers whose main profession is animal husbandry. The land mentioned above is linked with the village and the cattle graze there. The mafia of mines is active in the area and they are trying to get the mining lease somehow. It is stated that to check the orders of mining lease the villagers filed an application in the court of district civil judge (junior) Bundi for a

permanent stay order. The application is under consideration and looking at the facts the learned judge has issued orders to maintain status quo.

In spite of this the Mining Engineer is issuing mining lease. And if this pace continues the entire pastureland will be converted into mining areas, which ultimately will uproot the villagers and force them to migrate. The memorandum demands cancellation of the mining lease and implementation of the court order.

Indiscriminate Mining in Upermaal Threats: of Landsliding

The mining activity going on for years now in the Upermaal region of Mandalgarh Tehsil in Bhilwara district has not only damaged the inner layers of land because of the use of explosives but has also affected the flow of underground water leading to the increasing chances of land sliding in the region.

It is noteworthy that the activity below the surface of the land has increased due to large-scale indiscriminate mining operations, which can be read by scientific equipments. In the last many years the movement of land at the deeper levels and earthquakes in Bhilwara, Udaipur and Rajsamand districts have been experienced last year and even earlier. But the departments of mining, mine-owners and the state government have not taken the matter seriously.

The illegal mining activity in the region is many times the legal mining activity going on with the permission of the government. In either case proper scientific method is not followed. The miners have dug several thousand feet long tunnels all over the region in search of better quality of stone and minerals with the help of explosive and have left them without properly filling them. The rainwater and sometimes-underground water also gets collected there leading to frequent instance of land sliding.

The rules of mining department state that once stone is mine out the crevices should be filled in with soil and debris and plantation should be done above that. Not a single mine owner has followed this rule. On the contrary the entire region is spotted with tunnels, ditches, crevices and deposits of debris created by legal as well as illegal mining.

The indiscriminate use of explosives has caused cracks in thousands of houses in Upermaal region. Several people have been injured in the last few years due to breaking of ceiling slabs and collapsing of houses.

The blasting of explosives is done by casual daily labours who are not trained in this field. Their lack of knowledge and the non-availability of safety devices and

methods has taken a toll of several life and made a number of people permanently handicapped.

The illegal explosives are stored in huts, mud houses in very unsafe conditions. A slight mistake may result into a big mishap. Several instances of such accidents have been recorded.

There was a time when the Uparmaal region was known for its wild life, sanctuaries, dense forest and rare vegetations. But the ever-increasing mining activities, both legal and illegal, have made the forest to disappear and the wild animals have migrated long back. But still in some patches of forests have wild animals like leopards, lions and tigers who come towards villages in search of food and due to the fearful sound of explosions. The ecology is disturbed and the inhabitants, labourer, etc. suffer from several incurable disease.

Uparmaal region witnessed the first peasant movement during the freedom struggle but now it gives a deserted post-nuclear war look. If mining and blasting in the region is not checked in time, it might not be possible to save it from earthquakes.

Amendment in Rules

In a recent amendment in the rules the state government have decided to give mining lease for Gypsum to the private entrepreneurs as well. This was so far reserved only for government enterprises only. A similar amendment has been made in Minor Minerals Discount rules-1986 to simplify allotment of mines of minor minerals.

Multinationals for exploration of base metals and other minerals in Rajasthan

31 applications have been submitted by six multinational companies for prospecting of base metals and other associated minerals at various places in Rajasthan according to Mr. S. Saifee, S.M.E. (HQ) Directorate of Mines & Geology, Rajasthan, Udaipur. Out of these 31 applications 24 prospecting licenses have so far been granted to 5 companies within a period of six months from the date of submission of P.L. applications, 5 cases are pending with the Central Government for approval and 2 cases are under process. Under these prospecting licenses more than 35,000 sq. km. area will be covered and more than 100 million US Dollars are likely be invested by these companies.

The first prospecting license has been granted to M/s BHP Minerals of Australia which signed a MOU with M/s HZL. Udaipur for base metals in Ajmer, Bhilwara, Tonk, Bundi, Rajsamand, Sawai Madhopur, Jaipur districts over 15,825 sq.

km. area under 6 Blocks (3 blocks by BHP and 3 by HZL). M/s BHP Minerals Ltd. have become the first company in the private sector which has been granted prospecting licenses not only in the State of Rajasthan but in the country after liberalization of the mining sector. BHP will spend 10 million US Dollars during first year of PL. Two more blocks of 1310 and 11486 sq. km. areas have also been applied by M/s BHP mainly in Bhilwara district and small parts in Ajmer, Rajsamand and Chittorgarh district which have been recommended for grant and the State Government has move these cases for approval to Government of India. One PL for aerial prospecting in Ajmer District over 2344.00 sq. km. area has also been granted to M/s HZL in partnership with M/s Pasminco Ltd. of Australia.

Another Australian Company, RTZ-CRA Exploration Ltd., which has made a 50:50 joint Venture Company with the cement giant M/s Associated Cement Company Ltd. of India, is the next one which has been granted a PL in Ajmer district over 1915 sq. km. area. The joint Venture Company is M/s ACC-CRA Exploration India Pvt. Ltd. (Now M/s ACC RIO Tinto Exploration Limited). One more area under prospecting license over 517 sq. km. in Sikar and Jhunjhnu district has been sanctioned in favour of this company.

Besides above, U.K.'s 600 million pounds Medtist Group of Company will invest in air born surveys and they have been granted 10 prospecting Licenses in Sirohi, Dungarpur, Banswara, Sikar, Nagaur and Jhunjhnu Districts of Rajasthan, one is under consideration. Medtist's Indian subsidiary M/s Metmin Finance and Holdings Ltd. will prospect total areas of 2776 sq. km. under these prospecting licenses.

Canada's Meridian Peak Resources Corporation are among the multinational companies will undertake aerial prospecting through its Indian subsidiary, M/s Meridian Minerals India Pvt. Ltd. This company has applied for 6 prospecting licenses over 9,910 sq. km. areas in Udaipur, Banswara, Dungarpur, Alwar, Churu and Nagaur Districts. 5 prospecting licenses have already been sanctioned to this company.

M/s RBW Minerals Industries Ltd., a Joint Venture Company of white Tiger Resources Inc. of Australia, Binani industries ltd. and Rajasthan State Mineral Development Corporation Ltd., have applied 3 prospecting licenses in Pali, Bhilwara, Tonk, Bundi, Chittorgarh districts. Out of 3 applications, two have been forwarded to GOI for approval and third application will be sent very shortly.

Marble of Rajasthan

History of marble mining in Rajasthan can be traced back to the days of Mughal Empire and British Empire when two architectural marvels of the country, namely, the Taj Mahal at Agra and the Victoria Memorial of Calcutta were built. Famous temples of Delwara (Mount Abu) and Ranakpur (Pali) are also testimonials of ancient marble industry in this State. Marble industry in those old days used to supply stones for Palaces, Monuments and temples but in the present days marble in some form or the other is used in hotels, motels, offices and residential houses and for other architectural purposes. It is for this reason that demand for marble is growing day by day.

Marbles are metamorphic rocks formed from recrystallisation of limestone or dolomitic limestone, which are capable of taking good polish. This is the genetic definition of marble but in the trade many other minerals, rocks like yellow limestone of Jaisalmer, black limestone of Chittorgarh or serpentine rocks of Udaipur are also sold in the name of yellow, black or green marble respectively. Thus, in the marble industry the genetic aspect of marble is not very important and it is the merit of the physical properties and craze of people in the building construction and architectural industry, which counts most.

Marble is one of the most important building stones of Rajasthan as it generates a lot of industrial and mining activity in the state.

The state of Rajasthan is the largest producer of marble in the country. The most famous marble deposit is at Makrana (Nagaur Distt.). The other marble deposits are in the districts of Udaipur, Sirohi, Pali, Ajmer, Jaisalmer, Jaipur, Banswara, Bundi, Alwar and Sikar.

All marble deposits except yellow marble of Jaisalmer, geologically belong to the Precambrian age in general and mostly forms part of Raialo series which lies between Aravalli & Delhi system of rocks. But marbles are also reported from Aravalli, Delhi and Vindhyan super groups. Even noncrystalline Limestones of Jaisalmer belonging to Jurassic age produce shelly yellow marble.

Since marble deposits belong to an old formation, they have been subjected to structural disturbance and have also been intruded by other rocks. Thus, only few belts of marble, which have escaped major structural changes, are quarried for obtaining suitable blocks of marble for industry.