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OF THE

CHIEF INSPECTOR OF MINES IN INDIA

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FROM

D. PENMAN, Esq., D.Sc., F.R.S.E.,
CHIEF INSPECTOR OF MINES IN INDIA.

TO

THE SECRETARY TO THE GOVERNMENT OF INDIA,
DEPARTMENT OF INDUSTRIES AND LABOUR,
SIMLA.

Dated Dhanbad, the 25th May 1936.

SIR,

I have the honour to submit the report upon the inspection of mines in British India for the year ending 31st December 1935.

INTRODUCTION.

The Indian Mines Act, 1923, applies to British India only and not to the Indian States. For the complete figures of production of all minerals raised from excavations of all depths in British India and the Indian States reference may be made to the statements of the "Mineral Production of India" published annually in the Records of the Geological Survey of India, and to the "Quinquennial Review of the Mineral Production of India" published every five years by the same Department. Detailed information of the mineral industries in Mysore—where the Kolar gold-field is situated—and Hyderabad (Nizam's Dominions) is given in the annual reports of the Chief Inspector of Mines in those States.

Section I.—Persons Employed.

During the year 1935 the daily average number of persons working in and about the mines regulated by the Indian Mines Act was 253,970, as compared with 229,381 in the previous year. The increase was 24,589 persons, or 10·72 per cent. Of these persons 129,381 worked underground, 59,882 in open workings and 64,707 on the surface. The numbers of men

and women, respectively, who worked underground, in open workings and on the surface were as follows :—

	Men.		Women.	
	1935.	1934.	1935.	1934.
Underground . . .	119,830	109,023	9,551	11,193
In open workings . . .	45,689	38,431	14,193	12,173
Surface	48,548	44,758	16,159	13,805
Total	214,067	192,210	39,903	37,171

The number of women employed underground was 9,551, or 7.38 per cent. of the total number of men and women employed underground. The percentage of women employed underground in coal mines was 8.99, as compared with 10.94 per cent., in 1934, 13.14 per cent. in 1933, 14.84 per cent. in 1932 and 16.81 per cent. in 1931. The provincial distribution of the women who worked underground was as follows :—

Province.	Number of women employed underground.		
	In coal mines.	In salt mines.	Total.
Bengal	3,575	..	3,575
Bihar and Orissa	5,136	..	5,136
Central Provinces	765	..	765
Punjab . . . . .	..	75	75
Total	9,476	75	9,551 in 1935, as compared with 11,193 in 1934.

The daily average number of persons employed in coal mines was 159,254, which is 7,879 more than the number employed in 1934. Of these persons, 48,909 were males employed in cutting coal, 24,033 were males employed as loaders of coal and 22,561 were women.

The increase in the daily average number of persons employed in 1935, as compared with 1934 is reflected in the larger quantity of minerals produced, the increases being most marked in coal, iron ore, and manganese.

Annual returns are now received of the number of persons actually at work, and also of persons who should ordinarily have been at work but were absent, on a selected day in February of each year. The returns relate only to coal mines. The day to which the returns apply must be the day of a week selected by the Chief Inspector in which there is the largest turnout of workers. For February 1936 the week selected by me was as follows :—

Bengal and Bihar and Orissa	13th to 22nd.
Assam, Baluchistan, the Central Provinces and the Punjab	10th to 16th.

Although these returns are for a day in 1936 they are included in this report as they would be more than a year out of date if held over till the submission of the report for the year in which they are made.

The returns for 1936 show that on the day selected 218,895 persons were either at work or were prevented from attending work. This figure is 59,641 more than the average number of persons employed in coal mines during 1935. Three of the important district comparisons are as follows :—

	Average daily attendance.	Attendance on selected day (absentees included).	Excess over average daily attendance.	Percentage excess.
Jharia Coalfield	66,992	87,319	20,327	30.34
Raniganj Coalfield	55,592	79,887	24,295	43.70
Central Provinces Coalfield	13,105	17,017	3,912	29.85

Some of the percentages of absentees are as follows :—All mines from which returns were received 7.1 ; Jharia 2.2 ; Raniganj 8.6 and the Central Provinces 7.9. It is probable that the reason for the low percentage of absentees in the Jharia coalfield is that a larger proportion of the labour force is resident at or near the mines than in the other areas. A detailed statement compiled from the returns is given in Appendix I, Table No. 1-A. It should be pointed out that February is probably the busiest month of the year, i.e., the month in which labour is most plentiful and that the figures for average daily attendance do not include absentees.

Figures showing the average output of coal per person employed are given below :—

	Tons of coal per person employed.			
	Underground and in open workings.		Above and below ground.	
	1935.	1933-34.	1935.	1933-34.
British India	185	181	132	130
Bengal and Bihar and Orissa	189	185	134	133
Assam	168	150	120	104
Baluchistan	39	60	39	56
Central Provinces	162	155	116	114
Punjab	116	105	78	66

There was an all-round increase in the average output of coal per person employed except in Baluchistan in which output was seriously affected by the Quetta earthquake. The increase may be ascribed partly to the increased demand for coal and partly to the increased output from the extraction of coal in pillars. In comparing the figures with similar figures in other countries it should be remembered that both men and women are

employed in Indian coal mines. In 1934 the output of coal per person employed above and below ground in the United Kingdom was 285 tons. In the same year, *i.e.*, 1934, comparative figures in certain other countries were Japan 308 tons; France 185 tons; Germany 333 tons and the United States of America 669 tons.

The number of persons employed in metalliferous (*including* mica, stone, clay and salt) mines was 94,716, which is 16,710 more than the number employed in 1934. 77,374 were men and 17,342 were women. Of the women, 75 worked underground in salt mines.

Bengal and Bihar and Orissa.—Throughout 1935 the supply of labour was ample for requirements except for short intervals during the cultivation and harvest seasons and at periods when religious festivals were being celebrated. The daily wage rates of miners, loaders and other oncost workers showed little variation, but the gross earnings per worker increased as the pits worked on a greater number of days than in 1934. Relations between employers and labour continued good and there was no industrial disputes of any note to record.

The general health of the mining population in the Jharia and Raniganj Mining Settlements was on the whole satisfactory. The death rate per thousand persons was lower in the Raniganj Mining Settlement but higher in the Jharia Mining Settlement. Cholera in epidemic form made its appearance in the Raniganj Mining Settlement particularly during July and August with the result that there was a considerable increase in the number of deaths from that cause, as compared with the previous year. In the Jharia Mining Settlement there was a slight increase in the number of deaths from cholera. The particulars of the activities of the Mines Boards of Health in the Raniganj and Jharia coalfields are given in Section V of this report, from which it will be seen that the work of both Boards is being satisfactorily maintained.

In the iron ore mines in the Singhbhum district there was an ample supply of labour. There were no strikes and the general health of labour was good.

At the copper mines worked by the Indian Copper Corporation, Limited, in the Singhbhum district, the supply of labour was sufficient for requirements and there were no strikes or epidemics.

At the mica mines in Chota Nagpur the supply of labour was sufficient for requirements. The demand for mica was maintained and in some respects increased over 1934. There were no widespread epidemics of cholera during the year.

Assam.—In Assam the supply of labour was sufficient for requirements and there were no strikes or epidemics. The use of safety hats and helmets to prevent accidents due to falls of minerals has been introduced in the mines and it is claimed that on two occasions the safety helmet saved the lives of two men, the helmets being completely broken on their heads without injury to the men themselves.

Central Provinces.—In the Pench Valley coalfield the supply of labour was adequate, although there was some shortage during pujahs and periods of cultivation. There was no alteration in the rate of wages. The prices of

food stuffs and clothing remained about the same. Relations between labourers and employers were good. On the whole the health conditions were satisfactory.

At the manganese mines in the Central Provinces, there was a large increase in the number of labourers employed and the supply of men suitable for underground work at Balaghat mine was insufficient for requirements. There was a tendency for wages to rise in consequence of the increased demand for labour. The relations between employees and employers was good and there were no strikes or stoppages. The health of the workers was satisfactory.

Punjab.—There was no change in the labour conditions in the Punjab and the supply of labour continued to be in excess of local requirements. There were no epidemics and the health and well-being of the community was satisfactory. Rainfall during the year was somewhat above the average and a sufficient supply of water was available throughout the year. Considerable progress was made in building work, layout of streets, etc.

Madras.—There was a general improvement at the mica mines in the Madras Presidency. Labour was plentiful and there were no strikes or epidemics. Relations between employees and employers were amicable.

Burma.—At the mines in the Northern Shan States worked by the Burma Corporation Limited, there was no shortage in the supply of labour at any time of the year. There were no strikes or epidemics. The anti-malarial measures at Namtu and Bawdwin were continued throughout the year with beneficial results. The average daily number of employees in all departments was 10,432, as compared with 10,583 in the previous year.

On the whole the supply of labour in Tavoy and Mergui districts was sufficient for requirements but in some of the mines a shortage of labour was reported. It appears likely that some methodical recruitment will have to be done in the near future. There were no strikes or lock-outs and the relation between employees and employers was good. There were outbreaks of cholera and small-pox in some districts. On the larger mines, however, preventive measures were successfully used, whilst the smaller mines, owing to their scattered nature, were not seriously affected.

The statistics furnished in this report show that the number of women employed underground is well below the permissible percentage on 1st July 1935. In many coal mines very few women are now employed.

In the table on page 6 figures are given of the average daily wages paid in December in each important mining field in India. If the figures are compared with those in last year's Annual Report it will be seen that in most cases there has not been much change in the average daily earnings. The daily earnings of coal miners, however, in the Raniganj coalfield were 2 annas and 3 pies less than in December 1934, and in Jharia coalfield 3 pies less. In the Central Provinces daily earnings remained about the same as in 1934. The earnings of mica miners in Bihar and Orissa were one anna and three pies higher and there was a considerable increase in the earnings of salt miners.

Average daily earnings in December 1935.

Mineral Field.	UNDERGROUND.						OPEN WORKINGS.						SURFACE.			
	Overmen and Sirdars — Foremen and Mates.	Miners.	Loaders.	Skilled Labour.	Un-skilled Labour.	Females.	Overmen and Sirdars — Foremen and Mates.	Miners.	Loaders.	Skilled Labour.	Un-skilled Labour.	Females.	Clerical and Supervising Staff.	Skilled Labour.	Un-skilled Labour.	Females.
	R a. p.	R a. p.	R a. p.	R a. p.	R a. p.	R a. p.	R a. p.	R a. p.	R a. p.	R a. p.	R a. p.	R a. p.	R a. p.	R a. p.	R a. p.	R a. p.
Jharia Coalfield (Bihar and Orissa).	1 2 0	0 7 9	0 6 3	0 10 3	0 6 9	0 5 0	0 15 0	0 7 9	0 7 0	0 7 3	0 5 0	0 4 9	1 2 6	0 9 6	0 5 9	0 4 3
Baniganj Coalfield (Bengal).	0 15 9	0 7 3	0 6 0	0 9 0	0 6 3	0 4 6	0 12 6	0 3 9	0 3 9	0 5 9	0 4 0	0 2 6	0 15 3	0 8 0	0 6 0	0 3 9
Girdih Coalfield . . .	1 9 0	0 9 0	0 7 6	0 12 3	0 8 0	0 6 9	0 12 3	0 7 9	0 5 0	0 8 6	0 6 0	0 4 9	1 6 9	0 13 0	0 8 0	0 5 6
Assam Coalfields . . .	1 5 0	1 0 6	1 0 6	1 0 6	0 13 6	..	..	..	..	..	..	..	2 1 0	0 14 3	0 11 0	0 7 0
Punjab Coalfields . . .	0 18 9	0 13 3	0 12 6	0 11 6	0 7 9	..	2 5 0	..	0 7 9	..	..	..	0 11 6	0 13 6	0 9 9	..
Baluchistan Coalfields .	1 4 0	0 11 0	0 10 6	1 0 0	..	..	..	..	..	0 10 0	..	..	..	..	..	..
Pench Valley Coalfield (Central Provinces).	1 3 3	0 12 6	0 6 9	0 10 9	0 7 0	0 7 0	1 0 9	0 9 0	0 5 0	0 8 0	0 6 6	0 4 0	1 2 3	0 9 9	0 6 9	0 4 6
Bihar and Orissa Mica . .	0 3 3	0 3 9	..	0 6 9	0 4 3	..	0 7 3	0 6 6	..	0 3 9	0 5 3	0 2 3	0 10 6	0 5 9	0 4 0	0 3 0
Madras Mica	0 8 0	0 4 9	..	0 4 3	0 4 0	..	0 7 0	0 3 9	..	0 3 9	0 4 0	0 2 9	0 8 9	0 5 6	0 4 3	0 2 6
Central Provinces Manganoese.	1 5 3	0 6 0	..	..	..	..	0 14 0	0 4 9	..	0 8 6	0 3 3	0 3 3	1 4 3	0 10 0	0 5 3	0 3 3
Central Provinces Limestones.	..	..	..	..	..	..	0 11 3	0 5 9	..	0 7 9	0 3 6	0 2 9	1 1 9	0 5 0	0 4 0	0 3 0
Bihar and Orissa Iron . .	..	..	..	..	..	..	0 13 0	0 4 6	..	0 11 0	0 4 9	0 3 0	1 5 9	0 11 9	0 4 9	0 3 3
Burma Lead	15 0 9	2 0 9	..	1 13 3	1 3 9	..	4 12 6	..	..	..	1 5 9	..	2 11 0	2 14 6	1 3 0	..
Burma Tin	3 9 3	1 1 9	..	1 6 9	0 15 6	..	2 1 3	1 3 3	..	1 0 6	0 14 6	0 11 3	2 5 6	1 6 3	0 13 0	0 12 0
Punjab Salt . . . . .	..	1 10 9	..	1 1 3	0 7 9	0 8 0	..	..	..	..	..	..	..	0 15 3	0 8 6	..
Bihar and Orissa China clay.	..	0 2 0	..	..	0 2 0	..	0 5 0	0 3 0	..	0 3 0	0 3 0	0 2 3	1 3 0	0 7 3	0 3 0	0 2 6
Punjab Slate . . . . .	..	..	..	..	..	..	0 8 3	0 5 9	..	0 6 3	0 4 0	..	1 11 9	..	0 6 3	..

Section II.—Output of Minerals.

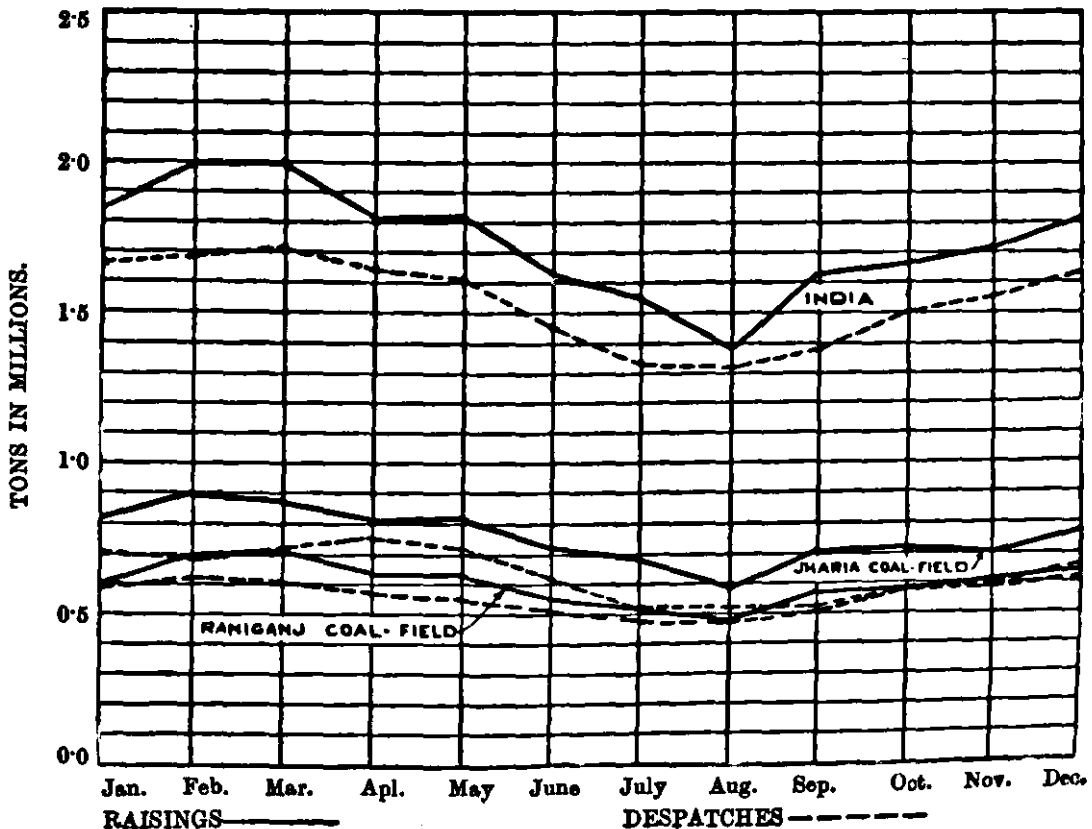
COAL.

Output.—The statement given below shows the output of coal in the various provinces in British India during the years 1934 and 1935 :—

	Output in tons.	
	1935.	1934.
Assam	218,830	186,313
Baluchistan	4,946	11,771
Bengal	6,682,752	6,159,486
Bihar and Orissa	12,436,828	12,322,161
Central Provinces	1,526,690	1,438,980
Punjab	144,423	125,266
Total	<u>21,014,469</u>	<u>20,243,977</u>

The total output in 1935 was 21,014,469 tons of a declared value of Rs. 5,84,24,501. The increase in the output was 770,492 tons, i.e., 3·81 per cent. and the increase in the value Rs. 14,78,322, i.e., 2·6 per cent. The opening stocks in 1935 were 945,718 tons and the closing stocks 1,115,154 tons. In the chart which appears below the raisings and despatches of coal are shown month by month :—

RAISINGS AND DESPATCHES OF COAL MONTH BY MONTH IN 1935.



It will be seen from the chart that, as usual, the output was highest in February and March and lowest in August. The output in August was to some extent affected by the exceptionally heavy floods during that month, causing the closing down of a number of mines for a period and interference with the work. In the Jharia and Raniganj coalfields at no period of the year did despatches exceed raisings.

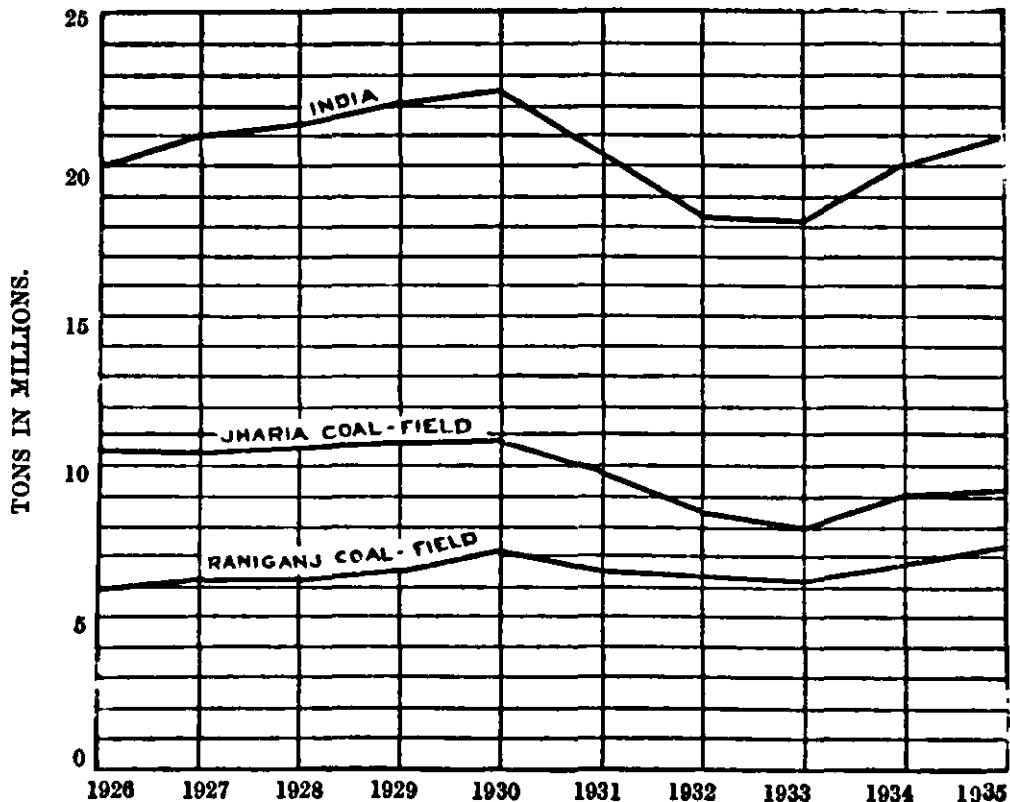
The output in Bihar increased by 114,667 tons, and in Bengal there was an increase of 523,266 tons. In the Central Provinces the output increased from 1,438,980 tons to 1,526,690 tons. There was an increase of 19,157 tons in the Punjab and a decrease of 6,825 tons in Baluchistan. There was an increase of 32,517 tons in Assam.

The figures of output for the principal coalfields are as follows :—

Coalfield.	1935.	1934.	Percentage increase + or decrease --.
Jharia	9,245,292	9,057,546	+2·07
Raniganj	7,348,323	6,795,838	+8·13
Bokaro	1,331,272	1,399,261	-4·86
Giridih	708,789	761,010	-6·86
Karapura	424,536	397,147	+6·90
Pench Valley	1,214,099	1,117,942	+8·60
Assam	218,830	186,313	+17·45

The output of the Jharia coalfield increased by about 2 per cent., the Raniganj coalfield by about 8 per cent., the Karapura coalfield by more than 6 per cent., and the output of the Assam coalfield by about 17½ per cent. There was also an increase in the Pench Valley coalfield of the Central Provinces of over 8 per cent. and in the Bokaro and Giridih coalfields the output fell by over 4 and 6 per cent., respectively. The accompanying chart shows the variation of the output of coal during the period 1926-35.

CHART SHOWING OUTPUT OF COAL DURING THE PERIOD 1926-35.



It will be seen from the chart that the upward movement in output of coal was maintained in 1935.

Despatches.—The despatches of coal were 18,384,728 tons, and 1,089,902 tons, or 5·19 per cent. of the raisings were consumed on the collieries. The quantity of coal used for coking at the collieries was 1,370,403 tons, and 890,547 tons of soft coke and 84,737 tons of hard coke were made. There was an increase, *i.e.*, 3·42 per cent. in the quantity of soft coke manufactured at the collieries for domestic consumption. The quantity of hard coke made at the collieries is small. Most of the hard coke is made at coke-making plants which do not come under the Mines Act, and 1,683,781 tons of coal were despatched to coke-making plants of this kind in 1935. This quantity is 285,739 tons more than in 1934. Analyses of the figures relating to the output of coal and the manufacture of coke will be found in Appendix I, Table No. 3.

The despatches of coal for the year exceeded those for 1934 by 343,311 tons. The stocks of coal at the collieries at the end of the year were, however, larger than in the beginning.

The following figures giving the average value per ton of coal put into wagons in various districts may be of interest:—Assam, Rs. 9 annas 8·2; Baluchistan, Rs. 7 annas 7·7; Bengal, Rs. 2 annas 9·4; Bihar and Orissa (Jharia coalfield), Rs. 2 annas 8; Central Provinces, Rs. 3 annas 9·1 and the Punjab, Rs. 4 annas 5·9. There was a reduction in the average value per ton of coal in every case except Assam and Baluchistan in which there were increases of Re. 1 annas 2·3 and Re. 1 annas 15·4, respectively. The fall in the average value was most marked in the Jharia coalfield, where there was a decrease of annas 8·7. The fall in average prices in the Bengal coalfield was annas 3·5; in the Central Provinces annas 6·4; and in the Punjab annas 4·7.

Trade Conditions.—The demand for all coal was better in 1935 than in the years preceding it since the slump began. Prices however did not improve, indeed the average of prices was less than in the previous year. The coal export trade showed no appreciable change over the previous year, but bunkering business increased slightly.

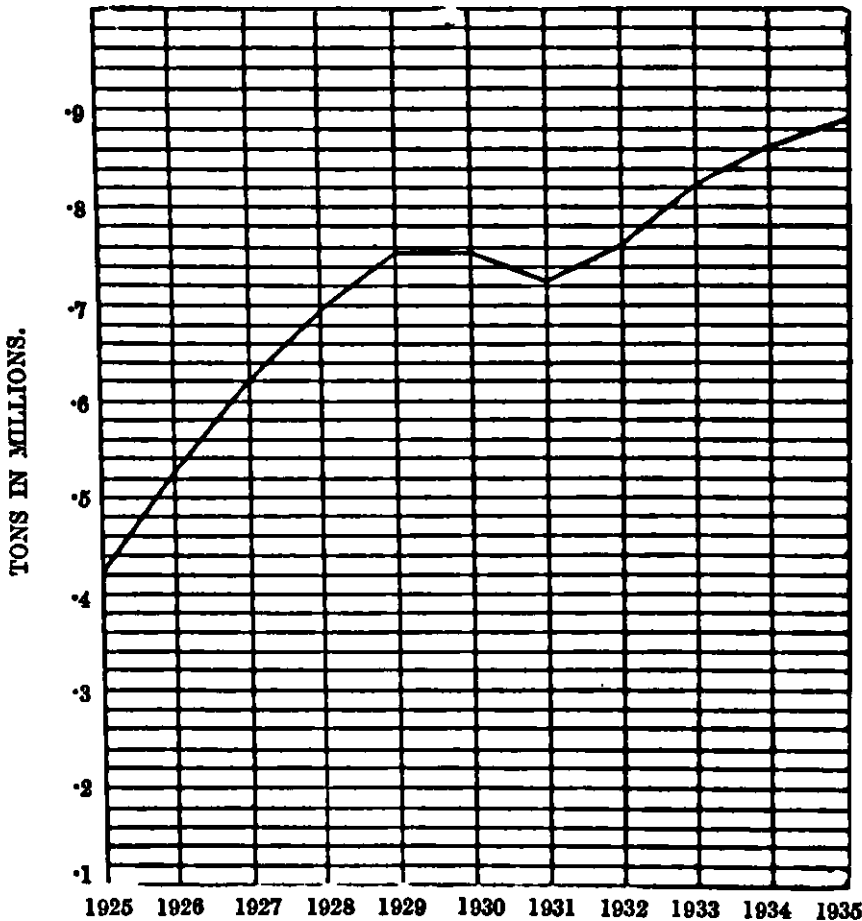
Coal Grading Board and Soft Coke Cess Committee.—The Indian Coal Grading Board, as in previous years, maintained the same standard of good work during the year 1935 and the quality of export coal was very satisfactory. During the year 1,883,872 tons of coal were exported under the supervision of the Board.

As in previous years the Indian Soft Coke Cess Committee continued their propaganda work in the principal cities and towns of the Punjab, United Provinces, Delhi, Bombay, Kathiawar States, Madras, the East Coast section of the Bengal Nagpur Railway and North Bihar. As a result of the Committee's efforts the popularity of soft coke as domestic fuel is increasing. The committee have now taken up the question of improving the quality of soft coke and arrangements have been made to inspect loading.

Approximately 888,493 tons of soft coke were despatched from the coal-fields during the year 1935, as compared with 860,478 tons during 1934. Out of the output for 1935, 843,696 tons were despatched from mines in the

Jharia coalfield. Prices were fairly well maintained. The accompanying graph shows the development of the soft coke industry during the last ten years.

1: DESPATCHES OF SOFT COKE FROM 1925 TO 1935.



Use of Electricity both at Coal Mines and at other mines.—The number of coal mines using electrical energy was 120, as compared with 119 in the previous year, and the aggregate horse power employed at coal mines increased from 77,491 to 82,038, i.e., by 5.8 per cent. The increase was due chiefly to the increased horse power of motors installed in the Jharia coalfield. During the year, electrical plant was installed and brought into operation in two additional coal mines and was temporarily withdrawn from one mine in Bihar.

Electricity was used at 29 metalliferous mines, as against 26 mines in 1934 and 18 mines in 1933, the aggregate horse power employed was 11,534 as against 9,943 in the previous year, showing an increase from last year of 16 per cent. The increase was due chiefly to the increased horse power of motors installed in salt mines.

Statistics of the electrical plant in use at mines in the various provinces of British India and in certain mine fields are contained in Appendix I, Tables Nos. 7, 8 and 9.

Explosives.—During the year 2,361,124 lb. of gunpowder, 59,588 lb. of high explosives, and 91,245 lb. of “permitted” explosives were used at coal mines. These figures compare with 2,363,492 lb. of gunpowder, 59,564 lb. of high explosives, and 79,667 lb. of “permitted” explosives used in 1934. In addition 64,030 lb. of liquid oxygen explosives were used. A statement of the kind and quantity of explosives used during the year in the different kinds of mines under the Act is given in Appendix I, Table No. 12.

An appendix has been added giving a list of “permitted” explosives.

Coal Cutting Machines.—The number of coal cutting machines in use was 95, as compared with 106 in use in 1934 and 105 in 1933. All the machines in use were worked by electricity. 28 machines were at work in the Jharia coalfield, 59 in the Raniganj coalfield, 2 in Karanpura coalfield and 6 in the Central Provinces. Coal cutting machines were in use in 36 mines, as against 38 in 1934 and the total area undercut was 6,634,100 square feet, as compared with 6,235,481 square feet undercut in the previous year, showing that, notwithstanding the stoppage of 11 machines in the Raniganj coalfield, coal-cutting machines have been employed, as in previous years, in many mines in obtaining their output.

Mechanical Ventilators.—In Appendix I, Table No. 10, particulars are given of the number of mechanical ventilators in use in coal mines under the Act. In 1935, 91 mechanical ventilators were in use, the number being 94 in the previous year.

Safety lamps.—In Appendix I, Table No. 11, particulars are given of the number of safety lamps in use in coal mines under the Act. 26,872 safety lamps were in use in 1935, as compared with 22,759 in 1934.

IRON ORE.

The production of iron ore was 1,179,050 tons, valued at Rs. 18,84,439 as compared with 834,477 tons, valued at Rs. 14,10,154, in 1934.

MANGANESE ORE.

There was an increase of 201,565 tons in the output of manganese ore, the figures of production being 422,847 tons, valued at Rs. 40,26,558, as compared with 221,282 tons, valued at Rs. 14,02,233 in 1934. The average reported value per ton of manganese ore produced rose from Rs. 6.34 in 1934 to Rs. 9.52 in 1935. The corresponding value in 1933 was Rs. 4.35. There was considerable improvement in the manganese industry during the year 1935. In consequence a number of mines, which had been closed, resumed production and there was a general increase of activity in the mines. The production of manganese ore in 1935 was about eight times as much as it was in 1933. There was also a considerable improvement in prices. The Central Provinces Manganese Ore Company, Limited, despatched a total of 636,717 tons as follows:—197,094 tons to Calcutta; 338,377 tons to Vizagapatam; 37,169 tons to Bombay; and 61,077 tons of other sales on f. o. r. basis. The quantity despatched by the company in 1934 was

333,623 tons, so that the despatches in 1935 were nearly double those in 1934 and nearly four times those in 1933. The average f. o. b. price realised in 1935 was 6.76 annas per unit. It is somewhat less than the figure of the previous year. This is due to a large tonnage of ore despatched having been second grade ore and to a larger proportion of 1934 despatches having been to meet deliveries under old contracts, i.e., the greater proportion of the 1935 despatches were fresh sales at the current market rate.

LEAD-SILVER ORE.

The output of lead-silver ore from the Bawdwin mine in the Northern Shan States, Burma, was 460,816 tons, as compared with 443,489 tons in 1934. The increase was 3.92 per cent. 70,560 tons of refined lead; 1,500 tons of refined antimonial lead; 5,825,913 ounces of refined silver; 1,222 ounces of refined gold; 8,950 tons of copper matte; and 4,850 tons of nickel speiss were produced. The experimental zinc plant at the Namtu mill produced 78,590 tons of zinc concentrates.

The average values of metals extracted were as follows:—Refined lead Rs. 190-7-3 per ton; refined antimonial lead Rs. 239-15-7 per ton; refined silver Rs. 1-12-0 per troy ounce.

The quantities of materials used for the purpose of fluxes were as follows:—Iron ore 18,489 tons; and lime-stone 16,109 tons.

SILVER.

16 ounces of silver, valued at Rs. 24 were produced from the Lowa gold and copper mine in the Manbhum District.

The quantity of refined silver produced at the Bawdwin mine was as mentioned above.

GOLD.

The output of gold in 1935 was 33 ounces which was obtained from the Manbhum district of Bihar and Orissa in addition to this, 1,222 ounces of refined gold were produced at the Bawdwin mine.

TIN AND WOLFRAM ORES.

The output of tin ore was 4,383 tons, valued at Rs. 75,94,694, as compared with 3,890 tons, valued at Rs. 68,23,045 in 1934. 2,549 tons of wolfram ore, valued at Rs. 26,21,323 were produced, as compared with 1,333 tons, valued at Rs. 15,18,015 in 1934.

CHROMITE ORE.

The production of chromite ore was 19,039 tons, valued at Rs. 2,37,374, as compared with 9,356 tons, valued at Rs. 1,27,427 in 1934.

COPPER ORE.

The output of copper ore was 350,801 tons, valued at Rs. 34,88,808, as compared with 328,676 tons, valued at Rs. 34,19,869 in 1934. The whole of the production came from the mines belonging to the Indian Copper Corporation Limited, in the Singhbhum district of Bihar and Orissa. The production of refined copper amounted to 6,900 tons, as compared with 6,300 tons in 1934. The production of yellow metal sheet and circles at the rolling mills was 10,721 tons involving the use of 6,734 tons of copper. Development of the Mosaboni and Dhobani mines is proceeding in depth.

As mentioned in an earlier paragraph 8,950 tons of copper matte were produced in the smelting of lead-silver ore in Burma.

ZINC ORE.

From the composite ore mined at Bawdwin mine in the Northern Shan States, Burma, 78,590 tons of zinc concentrates were produced for shipment. The production in 1934 was 68,838 tons.

GEMS.

98,753 carats of rubies, valued at Rs. 1,10,213, 2,474 carats of sapphires, valued at Rs. 329; and 6,687 carats of rubins valued at Rs. 3,850 were mined in the Katha district in Burma.

MICA.

The quantity of mica consigned was 58,553 cwt., valued at Rs. 25,39,442 as compared with 55,555 cwt., valued at Rs. 20,67,473 in 1934. The output of dressed mica in 1935 was 59,984 cwt., as compared with 59,998 cwt. in 1934. In addition, 3,808 cwt. of waste mica fit for splittings valued at Rs. 12,702 were consigned from Nellore district, Madras Presidency. The output of this kind of mica was 5,266 cwt.

The quantities of mica and splittings shipped in 1934 and 1935 are as follows:—

	Cwt.	Rs.
1934	55,702	48,94,398
1935	78,114	65,85,219

In addition 58,481 cwt. of "pattern cut" and scrap having a value of Rs. 6,04,806 were shipped, as compared with 26,476 cwt. valued at Rs. 4,12,443 of the same stuff in 1934.

ROCK-SALT.

The production of rock-salt was 150,515 tons, as compared with 154,955 tons in the previous year.

LIMESTONE.

The reported production of limestone was 1,000,308 tons, valued at Rs. 11,00,846, as compared with 940,860 tons, valued at Rs. 11,17,309 in 1934.

STONE.

Returns were submitted by the owners of one hundred and twenty-four stone mines, and the figures of production were as follows:—1,507,569 tons of igneous rock; 71,212 tons of laterite; 46,006 tons of sandstone; 27,576 tons of gravel; and 20,756 tons of murum. The total production was 1,673,119 tons, as compared with 2,323,636 tons in 1934.

CLAYS.

From the twenty-two clay mines from which figures were obtained 27,236 tons of fire-clay, 10,407 tons of China clay and 34,058 tons of ordinary clay were produced.

OTHER MINERALS.

The production of other minerals were as follows:—7,508 tons of slate, valued at Rs. 1,47,733; 12,840 tons of magnesite, valued at Rs. 75,905; 3,533 tons of gypsum, valued at Rs. 7,942; 270 tons of barytes, valued at Rs. 2,160; 4,709 tons of steatite, valued at Rs. 36,858; 203 tons of ochre, valued at Rs. 2,019; 600 tons of felspar, valued at Rs. 4,409; 102 tons of apatite, valued at Rs. 1,532; 54 cwt. of asbestos, valued at Rs. 1,267; and 556 cwt. of corundum, valued at Rs. 6,181. Small quantities of fuller's-earth, beryl, bismuth, chalk and graphite were also produced.

Section III.—Accidents.

During the year 1935 at mines regulated by the Indian Mines Act, 1923, there were 202 fatal accidents which is 25 more than in 1934 and 24 more than the average number in the preceding five years.

In addition to the fatal accidents there were 842 serious accidents involving injuries to 869 persons, as compared with 679 serious accidents involving injuries to 692 persons in the previous year. The so-called "serious" accidents reported are those in which an injury has been sustained which involves, or in all probability will involve, the permanent loss of or injury to the sight or hearing or the fracture of any limb or the enforced absence of the injured person from work for a period exceeding twenty days. Three hundred and twelve persons were killed and 918 persons were seriously injured. The latter figure includes 49 persons injured in fatal accidents. The number of persons killed was 103 more than in 1934. Two hundred and eighty four persons killed were men and 28 were women. In one case

62 lives ; in one case 19 lives ; in one case 11 lives ; in five cases 3 lives and in eleven cases 2 lives were lost.

The proportion of accidents which occurred to men and women, respectively, underground, in open workings and on the surface were as follows :—

	No. of fatal accidents.	No. of men killed.	No. of women killed.	Death rate per 1,000 persons employed.		No. of serious accidents.	No. of men injured.	No. of women injured.	Serious injury rate per 1,000 persons employed.	
				Men.	Women.				Men.	Women.
Underground .	154	236	24	1.97	2.51	630	611	37	5.10	3.87
Open workings.	33	35	2	0.77	0.14	48	43	10	0.94	0.70
Surface . . .	15	13	2	0.27	0.12	164	151	17	3.11	1.03

There was an increase in the death rate of men employed underground and in open workings and a decrease in the rate for men employed on the surface. With respect to women there was an increase in the death rate underground and on the surface and a decrease in open workings. The causes of the fatal accidents have been classified as follows :—

	No. of fatal accidents.	Percentage of total number of fatal accidents.
Misadventure	122	60.40
Fault of deceased	35	17.33
Fault of fellow workmen	10	4.95
Fault of subordinate officials	20	9.90
Fault of management	15	7.42
Total	202	100.00

The increase in the number of persons killed over the previous year was mainly due to the large number of lives lost in two accidents by explosions of inflammable gases and coal-dust at Bagdigi and Kurhurbaree collieries.

I have analysed the serious accidents and find that out of the total of 918 persons seriously injured, 69 were permanently partially disabled and 849 were only temporarily disabled.

Fire-damp.—There were three fatal accidents by explosion or ignition of fire-damp and coal-dust, involving the death of 83 persons. There was also one accident causing injury to one person.

Falls of roof and sides.—Falls of roof and sides caused 132 fatal accidents and 231 serious accidents. As compared with the figures under this head in the previous year the total number of accidents increased from 253 to

363; the number of persons killed increased from 133 to 147; and the number of persons seriously injured increased from 160 to 240. In one case three persons were killed by a fall of roof in a depillaring area; while in one case three persons and in three cases two persons were killed by falls of roof in galleries or depillaring areas. The accidents by falls of sides included one in which two persons were killed in depillaring areas and in one case three and in another two persons in galleries. The increase in the number of persons killed in 1935 by falls of roof and sides as compared with the number of lives lost in 1934 from the same causes may be attributed to the increase in output of coal and number of persons employed and also to the increased proportion of output got from the extraction of pillars.

In shafts.—There were 10 fatal accidents and 20 serious accidents in shafts, as compared with 4 fatal accidents and 16 serious accidents in the previous year.

Suffocation by gases.—There were two fatal accidents due to suffocation by gases, each involving the death of two persons.

Explosives.—There were 7 fatal accidents and 22 serious accidents caused by explosives. In the previous year the figures were 13 and 11, respectively.

Irruption of water.—There was one fatal accident from this cause, involving the loss of eleven lives.

Haulage.—There were 20 fatal accidents and 161 serious accidents on haulage roads. The accidents due to haulage have been classified as follows:—

Classification.	Fatal.	Serious.	Total.
Haulage rope breaking	1	1	2
Coupling chains and hooks breaking	1	..	1
Drawbars breaking . . . . .	..	..	..
Couplings becoming detached	2	2	4
Riding on sets (authorised) . . . . .	..	1	1
Riding on sets (unauthorised)	5	9	14
Allowing tubs to run uncontrolled . . . . .	..	9	9
While hand-tramming tubs	2	37	39
While guiding tubs on a curve . . . . .	..	5	5
Following derailments or while re-railing tubs	4	44	48
While coupling or uncoupling tubs . . . . .	..	11	11
While resting on or loitering about haulage roads.	3	7	10
Crushed against tubs, sides of roadways, doors, etc.	1	18	19
Unclassified	1	17	18
Total	20	161	181

There was a reduction in the number of accidents due to breakdown in material, there being only three in 1935, as compared with four in 1934.

Accidents due to riding on sets represented 8·3 per cent. of the total in 1935, as against 7·5 per cent. in 1934. In a total of fifteen accidents, fourteen were due to unauthorised persons riding on sets. It would appear that the discouragement of set-riding by means of withholding authorisations has not had the desired effect, for persons are merely continuing to ride on sets without being authorised to do so. Stricter supervision on the part of supervising staffs is necessary in order to prevent accidents of this nature.

There has been a slight reduction in the number of accidents due to allowing tubs to run uncontrolled.

Accidents occurring while hand-tramming are still very numerous. They are due chiefly to carelessness, a common cause being that of hand-trammed tubs overtaking and injuring persons pushing tubs in front.

Accidents due to guiding tubs round curves continue to occur and those following derailments or while re-railing tubs still form a large percentage of the total. Attention is again drawn to the remarks in previous reports on the subject of well laid haulage tracks.

Underground machinery.—Eight serious accidents were caused by underground machinery.

Sundries Underground.—Thirteen fatal accidents and 234 serious accidents were due to miscellaneous causes underground.

Surface Machinery.—Two fatal accidents and 14 serious accidents were caused by surface machinery.

Surface Railways and Tramways.—Ten fatal accidents and 86 serious accidents took place on surface railways and tramways.

Electricity.—There were three serious accidents attributable to the use of electricity. There was also one non-statistical fatal accident by electricity.

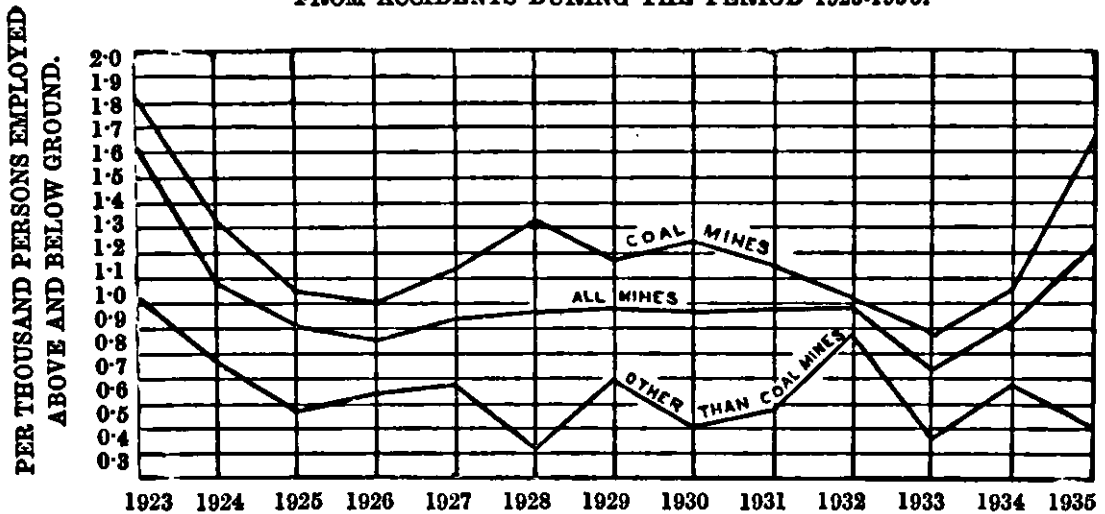
Miscellaneous on the surface.—Two fatal accidents and 62 serious accidents of this kind took place on the surface.

Accidents excluded from the statistics.—Twenty accidents causing 20 deaths were excluded from the statistics for reasons which are given in Appendix II.

Death rates.—The death rate per thousand persons employed above and below ground was 1·23 which was more than the rates in 1933 and in 1934. The average rate for the preceding five years was 0·95. At coal mines the rate was 1·66 as compared with 1·04 in 1934. At mines other than coal mines the rate was 0·51, as compared with 0·67 in 1934. The death rate for coal mines was the highest since 1923 when it was 1·83.

The chart below shows graphically the variation in the death rate during the period 1923-35.

CHART SHOWING THE DEATH RATE
FROM ACCIDENTS DURING THE PERIOD 1923-1935.



The death rate per million tons raised at coal mines was 12.56, while that of the preceding five years was 8.25.

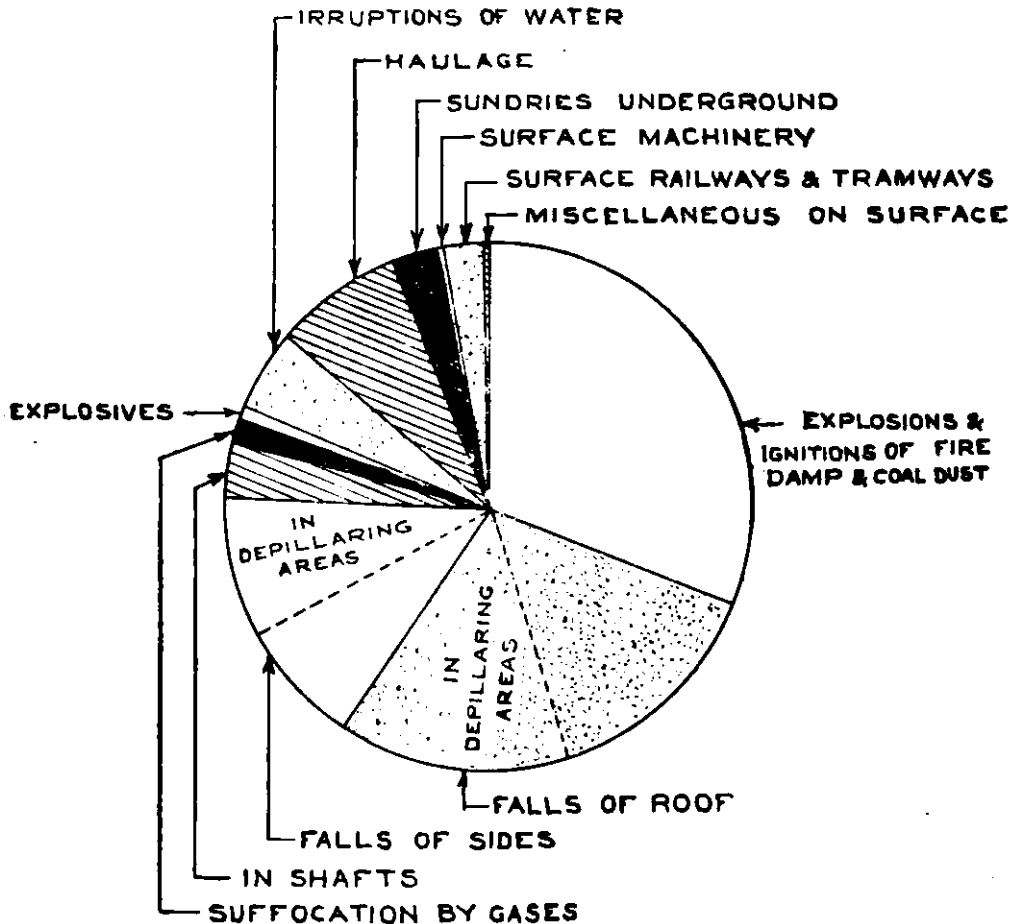
Deaths occurring in each class of mines were as follows :—

264 in coal mines, 4 in an iron ore mine, 4 in mica mines, 2 in silver-lead mines, 16 in tin and wolfram mines, 7 in limestone mines, 9 in stone mines, 1 in a copper mine, 2 in a chromite ore mine, 1 in a slate mine and 2 in manganese mines.

Eighty-three persons lost their lives due to explosions and ignitions of firedamp and coal-dust, 76 persons lost their lives by falls of roof; 71 by falls of sides; 11 in shafts; 4 by suffocation by gases; 7 by explosives; 11 by irruptions of water; 22 by haulage; 13 by other accidents underground and 14 on the surface.

The accompanying chart shows the relative importance of the various causes of accidents for coal mines during the year.

CHART SHOWING
DISTRIBUTION OF CAUSES OF PERSONS KILLED IN AND ABOUT COAL MINES
IN THE YEAR 1935.



A list of the fatal accidents appears in Appendix II, Table I, where each is described briefly. The details of certain accidents are reported at greater length as follows:—

EXPLOSION OF INFLAMMABLE GAS.

No. 2. Messrs. Anderson Wright and Company's Bagdigi coal mine.

(Nineteen killed.)

This accident occurred on 29th June 1935 and resulted in the loss of nineteen lives. In addition, seven persons were injured. The accident was

the subject of an inquiry under Section 21 of the Indian Mines Act. The following description is given of the accident and includes relevant extracts from the published report :—

“ The accident occurred on 29th June 1935 on the afternoon shift. The shift normally commences at 2 P. M. and finishes at 10 P. M. According to the colliery register 105 persons entered the mine during that shift. In addition there were three overmen, one overman in charge of the district in which pillars were being extracted, one overman in charge of the three goaves which had been sealed off and one overman in charge of the gallery work on the south side of the mine. The total number of persons employed in the district from which pillars were being extracted was 91. The number of persons working in driving galleries on the south side and in dealing with the three goaves which had been sealed off was seventeen, making a total number of 108”. * * * *

“ About 7 P. M. Chitoo Mia, in charge of the men in the area in which depillaring was going on, suspected that things were not as they should be. There is no clear evidence as to what he suspected as he lost his life in the mine”. * * * *

“ It would appear, therefore, that there were indications of heated air, a smell of fire and some smoke in the workings before the withdrawal. Whatever the full circumstances it is clear that the overman, Chitoo Mia, who, owing to his training and experience, would naturally be able to detect signs of danger more quickly and more accurately than the miners, decided to order the withdrawal of the men in his district. The exact time of the withdrawal of the workmen is not clear. Bislam stated that the workmen came up about 7 P. M. Kesho Singh said “ between 8 and 9 o'clock ” ; Bhola Nath Rewani stated that he saw the miners coming up about 7 P. M. while the register showed that the miners came out of the mine in groups at 8-10, 8-20 and 8-30 P. M. The withdrawal of nearly 100 workers would take some time as they collected their picks, baskets, etc., and took them with them and they had to travel a distance of about 2,000 feet before they emerged from the mine. It may be assumed, therefore, that the order for withdrawal was given about 7-30 P. M. The withdrawal was carried out in an orderly manner. According to Bislam the workmen came out “ quite slowly ”. Chitoo Mia, the overman, who ordered the miners out of the mine, did not come out with them. Bhola Nath Rewani stated that he was told by Jagnarain Pandey (dead) that “ Chitoo Mia had gone to No. 6 incline ”, i.e., to the workings off that incline, presumably in order to withdraw the workmen employed there ”. * * * *

“ When Bhola Nath came out of No. 5 incline “ there were about 25 persons standing at the side of the register-keeper's hut ”. He told them to “ clear away from that place ”. He then went to tell the manager, but as he did not see the manager's car in the garage he went to the assistant manager's bungalow. (The manager had gone out in his car at that time.) Bhola Nath found the assistant manager had gone away ”. * * * *

“ Meantime Mr. Hari Sadhan Chatterjee, the assistant manager together with a day shift overman, had essayed to go down the incline cutting leading to No. 5 incline. According to Andharoo Bilaspuri who was near the register-keeper's hut at the time, six or seven men followed them. It is not

known how far the assistant manager and those with him got down the incline cutting. The manager stated that some three weeks after the accident he found a watch in the cutting about 40 feet from the entrance to the mine. The watch appears to have been the property of the assistant manager. As the assistant manager and those with him were about to enter No. 5 incline a violent explosion took place and a great volume of flame, together with dust and pieces of coal, were projected out of the incline with terrific force. The assistant manager, the overman and fourteen miners were burnt and injured by the explosion at this incline. The register-keeper was in his hut, and escaped being burnt or injured. The exact time of the accident could not be ascertained but it would appear to have occurred about 8-50 P. M."

"Twenty-one persons in all were burned or injured outside the mine by the explosion. Of those, 16 were burned or injured near No. 5 incline and 5 near No. 6 incline. The five persons at the surface near No. 6 incline were not burnt but only injured by flying stones, and have recovered, but of the persons injured near No. 5 incline, 14 died and only 2 recovered. The force of the explosion at No. 5 incline was such that one of the persons was injured at a distance of over 300 feet from the mouth of the incline, and died from his injuries. The body of one of the persons who was near the entrance to No. 5 incline at the time of the accident was not recovered until the following morning. Five persons including Chitoo Mia were lost in the mine."

No inflammable gas had ever been detected in the workings of the mine. All the workmen used naked lights. It appears that rain had been falling heavily for some hours before the accident and there was evidence showing that a retaining wall protecting the mine from a large tank and nullah collapsed shortly before the accident. It was concluded that a large quantity of water was suddenly admitted into the upper seams which were on fire. This water generated gases and produced a reversal of the air in the mine which gradually filled the workings with an inflammable mixture of gases and air. This mixture was ignited either from the fire in the upper seams or by the naked lights of the five persons who were entombed in the mine.

The report continues :—"The explosion was without a doubt predominantly one of a mixture of inflammable gases and air but as it is likely that there was dry coal-dust on the haulage roads and rise workings of mine, and the evidence shows that clouds of fine coal-dust were expelled from the mine by the explosion, the possibility of the explosion having been extended and its force augmented by coal-dust cannot be ruled out." * * *

Recommendations.

1. "This accident has focussed attention on a problem which exists in most of the coalfields of India but which is more serious in the Jharia coalfield than in any other. In the Jharia coalfield there are no less than forty separate fires in twenty-two different collieries. These fires demand perpetual vigilance on the part of the management and may constitute a standing menace to the mines in which they exist".

“In most cases up to the present the fires exist in the seam which is being worked but recently in some mines the extraction of pillars has been commenced in seams which lie below upper seams which are on fire. A special and perhaps unique feature renders the exploitation of the seams extraordinarily difficult. The difficulties did not present themselves forcibly in the earlier days of mining but in the past few years the extraction of pillars has increased enormously and it is in that operation that the difficulties and problems arise. In many mines working the better class seams practically the whole of the output is obtained from the extraction of pillars. The extraction of pillars in a thick seam by the method at present practised in the Jharia coalfield has inevitably resulted in the subsidence of the surface and the breaking up of the ground on an extensive scale. Moreover, the method results in the unavoidable loss of a considerable proportion of the coal during the extraction of pillars and the probability of fire breaking out in the coal left in the goaf. It is true that many of the fires that have occurred have been due to unsystematic extraction and reduction of pillars with consequent premature collapses but the presence of fires which have resulted from such methods has increased the difficulties of extracting the remaining pillars in a seam by systematic methods. When it is mentioned that in some parts of the Jharia coalfield as much as thirty per cent. of the strata in a depth of 300 feet or 400 feet consists of coal in workable seams of great thickness it will be realised that as one seam after another is extracted the destruction of the intervening ground is enormous”. * * *

“In considering the problem a difficulty arises in that we have little or no accurate knowledge or experience of the conditions and dangers that may arise in such circumstances. It was mainly for this reason that we deemed it desirable to obtain the opinions of experts in this enquiry. * * * * * There was a wide diversity of opinion as to the precautions that were necessary in mines in which there were fires. It is clear, therefore, that the problems arising from fires in coal mines whether in the same seam or in the working of seams below other seams in which fires exist call for a full investigation, and this brings us to our first recommendation, viz., that Government should, as soon as possible, appoint a representative Committee to enquiry fully into the dangers arising from underground fires in coal mines and to report on the steps that should be taken to combat these dangers. All the expert witnesses examined supported this proposal and one stated that, in his opinion, the necessity for such an enquiry was urgent and overdue. We consider that the scope of the enquiry should include conditions with respect to underground fires in the two major coalfields of Jharia and Raniganj”. * * *

The other recommendations made in the report include :—

- (1) the framing of a regulation requiring the management of all coal mines to take adequate steps to prevent air passing through a goaf or area in which there is a fire,
- (2) the provision of a mechanical ventilator in mines in which there is a fire,
- (3) the sending of a notice to the Inspector of Mines and the District Magistrate when an influx of noxious gases occurs in a mine,

- (4) amendments to Regulations 70(4), 72(2) and 87 of the Coal Mines Regulations, 1926, requiring inspections of fire stoppings and parts of the mine in which there is a fire to be made with safety lamps and means of detecting carbon monoxide,
- (5) the use of safety lamps in districts of a mine in which there is a fire,
- (6) a regulation requiring precautions to be taken with respect to the danger of coal-dust in mines in which there is an underground fire,
- (7) a regulation restricting the working of a seam below an area in an upper seam which is on fire so that the strata between the seams shall be maintained unbroken. * * *

As the result of the above accident and other information regarding fires in coal mines and particularly in the Jharia coalfield emergency safety regulations have been framed. These regulations cover almost all the recommendations of the Court of Inquiry into the above accident and in addition deal with other dangers in connection with fires in coal mines that have been brought to light by recent events.

EXPLOSION OF COAL-DUST.

No. 3 The Government of India Railway Department's Kurhurbaree (Joktiabad) coal mine.

(Sixty-two deaths.)

This accident occurred at Kurhurbaree (Joktiabad section) colliery at 4 P.M. on 24th July and was due to an ignition of coal-dust by a blown-out shot of liquid oxygen explosive. The mine was non-gassy and was worked by naked lights. The seam worked varies in thickness in the mine and, in No. 19 district, where the accident took place, is about 13 feet thick. The method of working is pillar and stall. The galleries were driven about 8 feet high in the bottom part of the seam leaving from 4 to 5 feet of coal next the roof. The roof coal was generally got down by explosives. The place of the accident is shown in Plan No. 1.

An enquiry under Section 21 of the Act was held into the accident and the following description includes relevant extracts from the published report :—

From the evidence and actual inspection of the scene of the accident we have no doubt but that the cause of the ignition of coal-dust was flame from a blown-out shot of liquid oxygen explosive. The Inspector of Mines made a careful examination of the position of each shot-hole. His explanation is as follows :—“ Four shots appear to have been charged and fired. Two had completely done their work, one had practically done its work, and No. 4 was a blown-out shot. I mean by this that the explosive blew out completely instead of doing its work. This is likely to have resulted in considerable flame. If a shot did its work there would be much less flame”. * * *

“ We examined the shot and agree that it was undoubtedly a blown-out shot. Some of the clay tamping still remained on the inside of the shot-hole”. * * *

“ It would appear that each shot-hole was charged with three cartridges of explosive. As each cartridge weighs about 6 ounces the charge in each shot-hole was 18 ounces of explosive, or an aggregate charge of $4\frac{1}{2}$ lbs. We believe that the explosive weight for weight is stronger than gunpowder. Apparently it was the custom at the mine to put three cartridges in each shot-hole. This is not a good practice as the charge in a shot-hole should, as far as can be judged, be proportioned to the work to be done. The Manager of Serampore Colliery where the same explosive was used said that “ in some shot-holes we only put one cartridge”. Another point of importance is that in view of the fact that it loses its effectiveness very quickly it requires to be charged and fired without delay. It was not good practice, therefore, to charge four shot-holes at one time especially when the whole of the work of charging the shot-holes had to be done by one man—the sirdar. Bhola Mia, the shot-firer in No. 5 district, stated that he was accustomed to fire only two shots at a time.

“ The shot-holes, in our opinion, were not well placed and were all highly inclined. The blown-out shot-hole was nearly vertical, a difficult position to charge and stem properly. We measured the length of this hole and came to the conclusion that it had been bored against the hard rock above the coal a circumstances which might add to the risk of its being blown-out.

“ We examined the place of the shots and many other places in the district for the presence of inflammable gas. The method of testing was by a safety lamp. In no place did we find any trace of inflammable gas. The Inspector of mines stated that “ on the morning after the accident I tested for inflammable gas. I did not find any trace of the gas anywhere”. He made subsequent tests with the same result. The manager also made tests but did not find any inflammable gas.

“ There was clear evidence that the explosion was one of coal-dust. There was abundant evidence of coking on roof, props, the coal in the tubs, and the sides of galleries.

The Inspector of Mines stated :—“ I examined the seam and it contained bands of very soft coal which powdered easily in the fingers. This, I think, would produce very fine dust. I have not seen these soft bands to the same extent in other seams in India”. We also examined the soft bands mentioned as will be seen from the inspection note made by one of the assessors and attached to the report. We came to the same conclusion as the Inspector of Mines. A close examination of part of the seam revealed definite bands of “ fusain ” a constituent of coal which quickly powders on exposure to air. “ Fusain increases the dustiness of coal because of its great friability. It is smudgy black material found on lumps of coal along the bedding planes and easily rubs off, soiling the hands on handling. It dries quickly and falls from the coal in the form of dust ”.*

“Four samples of the dust in the galleries were collected and examined and they were found to contain a proportion of very fine dust. It should also be pointed out that as the explosion had traversed the area in which the samples were collected, much of the finest dust had been consumed. The analyses also showed that the dust was dry, *i.e.*, it contained no moisture beyond that inherent in the natural coal.

“The soaking vessel was found to have been upset with the open end away from the plates at the time of the explosion. The vessel has two lids made of galvanised iron. Holes had been burnt in both of the lids. Apart from that the vessel was undamaged. The liquid oxygen container and the cartridge bag were near by. The cartridge bag was undamaged but part of the coir covering of the container had been burnt. It is clear that there must have been soaked cartridges in the soaking vessel at the time of the explosion, and it is likely also that it contained a quantity of liquid oxygen. There is clear evidence of persons having been sitting in the vicinity of the soaking vessel at the time of the explosion. Some of these persons appear to have been in possession of naked lights. We are, however, of the opinion that the cartridges must have been ignited by the flame of the explosion and not by the lights of the persons near by. The soaking vessel was found with a long wooden stick through the handle—the tamping stick for charging the shot-holes—and the two lids of the vessel owing to its construction nearly closed. The explosive is not readily ignited unless a light is actually brought into contact with a soaked cartridge. We, therefore, think that the flame of the explosion ignited the cartridges and that the vessel was upset in consequence. When so ignited the cartridges do not explode but burn with an intense flame, hence the reason for the holes burnt in the lids.

“The explosion does not appear to have been violent. Some of the persons who were burnt had sustained cuts or bruises but these were not directly due to the explosion. There was a heavy displacement of air which blew out the lights of all the persons in the district and according to Gobind Kahar was noticeable at the pit bottom, 2,000 feet away. * * * Judging from the evidence of survivors and the signs of coking, the flame of the explosion traversed a total length of galleries of 900 feet, and radiated in two directions from the position of the shots.” * * *

The report goes on to discuss the possible effect of the enrichment of the air by oxygen and concludes from tests and measurements that the addition of oxygen gas to the air was so small that it could have little or no effect on the initiation or spread of the explosion.

The report continues :—“Summing up the matter we are of the opinion that the explosion can be fully accounted for by (a) the fine impalpable nature of the coal-dust; (b) the loading of tubs in the vicinity of the place of firing which would result in considerable quantities of dust being raised; (c) the congested nature of the district; (d) the presence of wooden cogs and timbers on which fine dust would readily settle; and (e) the three heavy charges of explosive fired and the flame of the blown-out shot. The heavy coking on the roof we consider was due to the fine nature of the dust and the fact that the flame naturally clings to the roof”. * * *

" In this connection we would invite attention to an ignition of coal-dust* which occurred on the surface at a colliery at Giridih on 23rd March 1908. A wagon of dust coal was being emptied by opening side doors in the wagon and allowing the coal to fall out. A cloud of dust was formed which was carried by a moderately strong breeze in a direction across the line. The dust cloud was ignited and burst into flame. The cause of the ignition was said to be red-hot ashes which had fallen from the ash-box of the locomotive. The coal-dust was from Kurhurbaree seam. The author of the note on the occurrence makes the following observation :—" The foregoing is another link in the chain of evidence proving that an ignition (which in a coal mine would be an explosion) can occur without the aid of fire-damp or blown-out shots". * * * *

CONCLUSIONS.

(1). " The accident, in our opinion, was due to an ignition of coal-dust by a 'blown-out' shot of liquid oxygen explosive. In the vicinity of the shot and in some of the adjoining galleries there was sufficient fine and dry coal-dust to propagate an explosion. The dust near the origin of the explosion was first of all raised into the air by the three shots which immediately preceded the blown-out shot and the flame of the latter was projected into the cloud of fine dust so formed. An initial ignition occurred which afterwards raised more dust which, in turn, was ignited, and the flame of the explosion was thus propagated over a total length of workings of approximately 900 feet. The main factors which, in our opinion, contributed to the ignition of coal-dust were :—

- (i) The presence of dry and very fine coal-dust on the roof, floor and sides of the working places, on the timbers, and on the tubs standing on the level tramming line.
- (ii) The high quality of the coal of Kurhurbaree seam, and the existence of bands of "fusain" in the seam.
- (iii) The small dimensions of the working places near the place of the shots, as compared with what is usual in Indian mines; the presence of a long set of loaded tubs near the place of the shots; and the presence of cogs and props on which fine coal-dust could settle.
- (iv) The discharge of three heavy shots which raised the fine dust in the immediate vicinity; and
- (v) The occurrence of a blown-out shot, which projected flame into the cloud of dust raised by the other shots.

(2) The explosion was, we think, limited in extent for two reasons, viz., (a) it did not attain any appreciable violence and thus did not raise any but the finest of the dust into the air nor drive ahead of the flame any large quantity of dust, and (b) as it travelled further from the origin the quantity of very fine and very dry dust grew less. The main haulage road was clean and wet, and in the higher working places work had only commenced so that very little fine dust had been produced there.

* Mr. G. N. A. Pitt; Trans. Mining and Geol. Inst. of India; Vol. III, p. 121.

(3) We do not think that the ignition of the cartridges in the "soaker" would in itself raise any coal-dust though the spillage of oxygen at that point might sustain the flame.

(4) The shots were not, in our opinion, well-placed and at least one of them appears to have been improperly stemmed.

(5) There is no reason to suppose that there was any inflammable gas near the shots or anywhere in the district at the time of the accident. All the evidence and the tests made point to there being no inflammable gas in the place.

(6) The high number of casualties was, in our opinion, due to the unusually large number of work-persons congregated on the loading line near the origin of the explosion and in the adjacent galleries. In our view the number of persons in the district was much greater than it ought to have been. Judging from the number of working places available we do not think that so many persons could have been usefully accommodated. There is clear evidence that during a large part of the shift a considerable proportion of the miners were waiting on an opportunity to work. The manager admitted that the number of miners in the district had been nearly doubled shortly before the day of the accident. As a reason for this it was stated that additional miners had been admitted to the district because the management were, for the time being, unable to provide accommodation for them elsewhere.

(7) The miners were allowed to congregate much too close to the shots. If they had been properly warned and sent a short distance up the haulage road, the number of casualties would, we think, have been very few.

(8) It was a mistake, we consider, to have the same official firing the shots and supervising the district. It is likely that he was so busy attending to the shots that he had no time to see that the miners had been withdrawn to a safe distance from the shots. While it is true that he would not have anticipated an explosion of coal-dust, some of the miners were not sufficiently clear of possible flying stones or coal from the shots.

(9) We are very doubtful if the place was watered at all before shots were fired. If watering was done it was quite inadequate to lay the fine dust. The firing of the shots was, therefore, in our opinion, a violation of Regulation 115 of the Indian Coal Mines Regulations.

(10) The system of verbally appointing the sirdars to fire shots was not in conformity with the provisions of Regulation 108.

(11) There was a great deal of carelessness in the handling of the explosive both in the charging of the shot-holes and the leaving of the "soaker" with inflammable cartridges at a place where persons were sitting.

(12) The registers of work-persons were incorrectly kept.

(13) We consider that, given similar conditions with respect to coal-dust and a similar sequence of shots, an ignition of coal-dust was just as likely to occur if gunpowder or high explosive had been used. Like liquid oxygen explosive, neither gunpowder nor high explosive is of the "permitted" class and a blown-out shot of either would result in flame being projected from the shot-hole.

(14) As an experience of several years of use of the explosive had produced no indication that it was any more unsafe to use than dynamite or gunpowder we do not think the management can be criticized for its use but we cannot refrain from commenting on the lack of care that seems to have prevailed in handling it, particularly in the instance in which the accident occurred."

The recommendations made in the report include :—

- (1) that owing to the liability of the explosive to be mishandled in the processes of preparation and use, it is an undesirable explosive for use underground in coal mines ;
- (2) that since in the opinion of the Court of Inquiry an ignition of coal-dust might have occurred at the place of accident if either gunpowder or high explosive had been used, no other explosive than one on the British "permitted" list should be used in any of the mines in the East Indian Railway collieries at Giridih whether inflammable gas has been found during the previous twelve months or not ;
- (3) that bye-laws designed to reduce the risk of an ignition or explosion of coal-dust should be introduced into the Giridih collieries ;
- (4) that similar bye-laws should be introduced into all mines in which safety lamps are used ;
- (5) that Regulation 115 should be amended as follows :—
 - (a) In any place in which the use of a locked safety lamp is for the time being required by or in pursuance of these regulations, the shot-firer shall not fire a shot until he has examined both the place itself and all contiguous accessible places within a radius of 60 feet for the presence of inflammable gas and has found such place free from gas.
 - (b) In any place which is not naturally wet, whether safety lamps are in use or not, no shot shall be fired until the place itself and all contiguous accessible places within a radius of 60 feet have been drenched with water to such an extent that there will be no danger of dry coal-dust being raised into the air by the shot.
- (6) that a large measure of safety can be attained by the firing of shots between shifts.

Action has been taken to give effect to the above recommendations.

SUFFOCATION BY GASES.

No. 146 The Bansra Coal Company, Limited's Toposi coal mine.

(Two killed.)

This accident occurred on the surface. The scene of the accident was a hole in the ground due to subsidence. The hole was about 4 feet square and

8 feet deep. The following description of the accident is given by the Inspector of Mines, No. 2 Circle, who enquired into the accident:—

“During the heavy rain on the 13th August 1935 the area was covered with water to a depth of about 8 feet and the manager observed that a large volume of water was flowing into the earth through the subsidence. When the water had subsided he filled up the hole in the subsidence with stones and earth but a few days afterwards the earth was washed away and the hole was again opened. In order to prevent water entering the subsidence again the manager had decided to throw large pieces of rock into the hole and on the top of the rock to place sacks filled with sand and then fill up the remainder with earth and cover the earth with turf. He sent the colliery surveyor to take charge of the work. The work had not actually been commenced and the surveyor was consulting with a sirdar as to how the work should be done; at this time Kali Bouri was sitting on the edge of the subsidence. It should be explained that the subsidence was in the form of a cave, at one side the sandstone had broken in such a manner as to form rude steps down to the bottom and on the other side the rock was overhanging. Kali Bouri was sitting on the top step when he suddenly fell into the hole and immediately became senseless. The surveyor immediately sent for the manager and for the doctor, and he posted Bhatu Bhuia, the second deceased at the mouth of the hole and told him not to allow any body to go into it. The surveyor himself then ran towards the mine office which was about 300 yards distant from the place of accident. On receiving information of the accident the manager got a long piece of rope from the colliery stores and proceeded in his car and met the surveyor on the way. On arrival at the hole the manager found the doctor present and a number of people collected there. They found that Bhatu Bhuia had also gone into the hole, presumably to try to rescue Kali Bouri and had also been overcome. Suspecting that the hole contained blackdamp the manager tested with a lamp. First of all he attempted to descend into the hole, but immediately he got his head below the level of the mouth of the hole he felt uncomfortable and decided that it was not possible for any person to descend. Then he got a pole and moved one leg of Bhatu Bhuia and manœuvred a noose formed at the end of the rope round the leg. Bhatu Bhuia was then hauled up to surface and the assistant doctor commenced artificial respiration. In the meantime the manager began to feel dizzy as he had inhaled a certain amount of blackdamp. The doctor replaced him at the hole and manœuvred a noose of the rope round a leg of Kali Bouri who was then hauled up to surface. After the two men had been brought to surface artificial respiration was continued for two hours and oxygen which had been obtained from Raniganj as quickly as possible was also administered. I saw the deceased at 11 a.m.—2½ hours after the accident—and artificial respiration was still being continued but the doctor examined the deceased and pronounced ‘life extinct’. * * * * The subsidences were due to the extraction of pillars close to the outcrop of the Toposi seam. I am unable to say when the pillars were extracted but it was probably 40 or 50 years ago. I have passed by these subsidences very many times since 1924 and have never seen any indication of fire. Moreover, there is still no indication of fire. I am unable to say where the blackdamp is being generated, but it is possible that the old Jotejanaky fire area has connected up with

these old goaves and the blackdamp is being carried through with the water which must be flowing underground from the outcrop towards the barrier which separates the old goaves from the present Toposi colliery workings". * * *

A sample of the air in the hole was taken and gave the following analysis:—Carbon dioxide 6·0 per cent. ; Oxygen 7·4 per cent. ; Nitrogen 86·6 per cent. ; Carbon monoxide and combustible gases—*nil*.

The manager was asked to fill up the hole.

BY IRRUPTION OF WATER.

No. 155 The Burrakur Coal Company, Limited's Loyabad coal mine.

(Eleven deaths.)

This accident occurred at 9-30 p.m. on 16th January 1935. Details of the place of accident and the adjoining workings are indicated on Plan No. 2. The Inspector of Mines, No. 1 Circle, enquired into the accident and his report was published by the Local Government. Copies of the report have been sent to owners, agents and managers of coal mines and certain metalliferous mines in the provinces of Bihar and Bengal. The following is an extract from the report:—

“On the night of the accident the deputy-overman who had had nine years' experience in the capacity of a subordinate official, examined all the working places, including the gallery (A. M.) at about 7-30 p.m., and after finding everything in order he states that he set 18 persons—13 men and 5 women—to work in the galleries, as indicated in the plan. He stated that at that time there was no water percolating from the rise side of the gallery (A. M.) Work was commenced at about 8 p.m. and two coal-cutters and a coal-carrier were engaged in No. 1 west level (A. M.). The deputy overman made a further examination at about 9 p.m., *i.e.*, just before the accident, when he found everything in order as before. One of the miners said that he was dressing the side of the gallery and had not been working long, in fact, he had not cut one basket of coal, when a piece of the side, as shown in the detailed drawings in the plan, broke away from two small 'slips'. An inrush of water followed immediately.

“The water rushed out of the level (A. M.) down the connecting dip gallery (P) and thence out of the level (O. N.) into the dip workings. The detailed dimensions of the hole that was made by the irruption of water are shown on the plan. It will be seen that the length of the hole was 4'—10" and the width 1'—10". The maximum height of the gallery was 8'—7", and the irruption took place near the face of the gallery. The coal-cutter and his coal-carrier were knocked down by the inrush of water and were carried some distance before they were able to regain their feet and reach the incline. Five persons were employed in No. 2 west level (O. N.). These persons were caught by the water from the first west level coming through the connecting gallery to their working place. Two of them were drowned and the other three escaped.

"In the dip gallery off No. 2 west level there were two persons at work. A fourth west level near the ram pump was about to be started, and two persons were engaged there. In the main dip there were three persons, whilst three others were working in the bottom east level. A pump khalassie was attending to the ram pump in the main dip. The places where the workers were engaged are indicated by black figures on the plan, whilst the red figures show where they were found after the accident. Immediately after the accident the manager was informed, and steps were taken to recover the bodies. The water level after the accident was as shown by the blue line on the plan, and it is estimated that about 623,800 gallons of water flowed from the old goaf and galleries when the connection was made. It might be thought that the water from the old workings would have readily percolated through the thin "web" of coal into No. 1 west level, but after the inundation it was found that the dip side of the old gallery adjoining No. 1 west level was covered with fine silt, which no doubt prevented water percolating through the thin "web" of coal. The appearance of the sides of the gallery, therefore, gave no warning of the impending inundation. The pressure of the water against the side of the gallery where the irruption took place was small, being about 5.4 lbs. per square inch, but the slab of coal which gave way was weakened by the 'slips'."

Exploratory work was done over a period of several weeks to determine the extent of the old workings.

Although it was impossible in the time available, due to difficulties in exploration work, to reach the extreme western edge of the coal, the Inspector of Mines thought it was justifiable to assume that the goaf extended to the extreme west. On this assumption he estimated that the water level before the irruption would be as shown by the red line on the plan. It was difficult to lay down an accurate line because it was not known to what extent the top section workings had been goafed and how much coal had been extracted in the goafed area of the bottom section. The line shown may, however, be taken to be approximately correct.

The report continues:—"It will be seen that the accumulation of water lay below the level of the accessible workings, and that unless on the ground that the available plans should have been suspected, the danger was not a visible one. * * *

"The primary causes that led to the accident were the inaccuracies that existed with regard to the plans of the area, and the lack of accurate knowledge of the actual extent of the workings.

"The manager had dewatered the goaf area at what appeared to him to be its lowest point, and, therefore, presumably he considered himself to be justified in the conclusion that there was no danger of an inundation of water from the goaf.

"Therefore, he did not consider that it was necessary to take the precautions prescribed by Regulation 74, made under Section 29 of the Indian Mines Act, 1923, even though he had left a barrier of less than 100 feet between the new workings and the old workings. It may be noted here that even if he had arranged for a barrier of 100 feet, the accident would still have occurred though not perhaps at the same place.

“The accident proved that the manager was entirely wrong in his assumption as the new gallery (A. M.) actually connected with the workings which were not shown on the plan in the manager’s possession and which he did not know existed. These workings contained a large quantity of water which on a connection being made entered the gallery (A. M.) inundated the dip workings and drowned eleven persons.

“Loyabad colliery is only one of several collieries belonging to the Burrakur Coal Company, Limited. The system in operation in the group of collieries was for the surveyor attached to each colliery to make the surveys required by the regulations under the Indian Mines Act, 1923, and then to plot these surveys or to have them plotted on the plans at the central office which is at Sijua. A tracing or print of the plan brought up-to-date was then sent to the colliery manager concerned.

“At the central office at Sijua there was a chief surveyor who was responsible for all the work done in the survey department. The chief surveyor at the time of the accident had been in charge since 1927.

“Up to May 1929, there were eight surveyors, a draftsman and a tracer employed at the central office, but subsequent to that date the surveyors were transferred to the collieries, leaving at the central office only the chief surveyor, a draftsman and a tracer.” * * * *

In the opinion of the Inspector of Mines the inaccuracy of the plan—due to its incompleteness—sent to the manager a few weeks before the accident from the central office—was mainly responsible for the accident.

“The manager appeared to have accepted the plan sent to him in good faith as being a true copy of the original plan. * * * *

“Another defect in connection with the plan of the part of the mine involved in the accident was that none of the plans was signed by the surveyor who made them, nor were the tracings signed. All plans should be signed and dated by the surveyor who has made them, and all tracings and prints of such plans should be certified as true and accurate copies by the head surveyor.

“There had been many changes of management at the colliery in recent years. Frequent changes of management are not conducive to the best interests of a mine particularly with regard to safety.

“It is essential that every new manager who takes charge of a mine—particularly a large one, as Loyabad colliery is—should have a complete and accurate knowledge of the history and the present condition of the mine.

“Special attention to the plans of the mine is necessary, and one of the first duties of a manager when he takes charge should be to examine carefully all the available plans.

“Changes of management are, in the nature of things, inevitable from time to time, but they should be as infrequent as is consistent with the interests of the company and the safe working of the mine. * * * *

“This accident has revealed a number of respects in which the system of making, maintaining, copying and comparing plans of the colliery is defective. The plan from which copies were made and sent to the manager did not show the whole of the workings which should have been shown on

them. It sometimes happens that when a final survey is made of a mine or part of a mine, certain workings may not be accessible due to their being filled with water or from some other cause. If that is so, a statement should be put on the plan to that effect and where possible the probable extent of the workings should be indicated on the plan.

“Again, it is required by Regulation 15 (2) that the position of the workings at the time of the last survey shall be shown by a dotted line—which shall be dated—drawn through the ends of the workings. On the so-called original plan an attempt had been made to do this, but it was incorrectly done. There was, it is true, a dotted line drawn through the workings and dated, but it was not drawn through the ends of the workings which is an essential point. Indeed on the plan the sides of some of the dip galleries were actually shown projecting beyond the dotted line.

“The dotted line required by Regulation 15 (2) must be drawn through the ends, *i.e.*, the termination of every separate working place, the intention being that the dotted line shall show the full extent of every working place at the time of the last survey.

“A careful examination of the plans would have shown these discrepancies, and even if no further knowledge was available, a definite suspicion would have been raised that either there had been gross carelessness in drawing the dotted line or that the full extent of the dip workings was not shown on the plan.

“In a system of making and maintaining plans, such as that in operation at the group of collieries under consideration, it should be clearly understood that the chief surveyor is primarily responsible for seeing that the plans are accurate and that all copies or prints of original plans are true and accurate and the chief surveyor should certify that they are so. This can only be done by his actually comparing the copies himself with the originals; he cannot evade the responsibility by entrusting that duty to subordinates, and it is courting disaster to do so.

“Moreover, the manager himself should have ready access to the original plans, and in cases where he has any reasonable cause for doubt and particularly where old workings which may contain water or gas are concerned, he should himself compare his working plan with the original.

“I suggest further that attention should also be drawn to the advisability of holding in suspect all old areas of workings which cannot be explored, and of the plans of which there is any doubt. In such cases if there is a possible danger of accumulations of water or gas, the precautions prescribed by Regulation 74 should invariably be taken.

“These matters are indeed all covered by the Regulations made under the Indian Mines Act, but as a similar system may be in operation at other centralised groups of collieries elsewhere, I consider that my observations should be brought prominently to the notice of all owners, agents and managers of collieries.

“None of the plans available in connection with the accident was signed by the surveyor who made them. There is at present no regulation, rule or bye-law which requires the surveyor to sign the plan. But it is clear that all plans should be signed by the surveyor and that in like manner all

tracings and copies should be signed and certified to be true copies, since often the tracing is done not by the surveyor himself but by some one subordinate to him.

“Accordingly I recommend that the following additions should be made to the bye-laws :—

(a) That bye-law 35 should be amended to read as follows :—

“The colliery surveyor shall make such accurate surveys and levelings as the manager may direct or as may be required by the Act or by Regulations or Rules framed under the Act and shall accurately plot them on the plans with reasonable despatch and shall sign the same and date the signature”.

(b) That a new bye-law should be added to the effect that :—

“All tracings and copies of colliery plans shall be signed and certified by the surveyor to be true copies.”

The amended bye-law and the new bye-law should, in my opinion, be made applicable to all mines at which bye-laws are established.”

The necessary action for the establishment of the amended and additional bye-laws has been taken.

Section IV.—Prosecution and amendments to the Act, Regulations, Rules and Orders made thereunder.

PROSECUTIONS.

During the year judgments in prosecutions were delivered as follows :—

A man employed in a coal mine in the Jharia coalfield was prosecuted under Section 35 of the Indian Mines Act for fraudulently impersonating his deceased brother and using the sirdar's certificate belonging to his brother. He was fined Rs. 50.

The owner of a coal mine in the Raniganj coalfield was prosecuted for failing to erect a fence of a permanent character round the incline of the mine which had been discontinued. He was fined Rs. 25.

The manager and sirdar of a coal mine in the Jharia coalfield were prosecuted for failing to make any mention in the report book of a fence which was erected owing to the dangerous condition of the roof in an underground gallery. The latter was fined Rs. 20. The former could not be traced.

The owners (two) of a coal mine in the Jharia coalfield were prosecuted for failing to notify the appointment of a temporary manager, for failing to secure properly the sides of a quarry which had been dangerously undercut at several places, and for failing to slope or step back the sides properly. One was fined Rs. 10 and the other Rs. 30.

The owners (three) and manager of a stone mine in the Sonthal Parganas district were prosecuted for failing to have the side of an open working stepped or sloped in such a manner as to prevent danger from falls of material with the result that a fall of side occurred and a workman was killed. The case was withdrawn.

The owner and manager of a tin mine in the Mergui district were prosecuted for failing to maintain an inspection book and for not posting or having available the prescribed abstracts of the Indian Mines Act, Regulations and Rules. The case against the owner was dropped and the manager was fined Rs. 20.

The agent of a coal mine in the Jharia coalfield was prosecuted for failing to fence the surface subsidence of a goafed area, two incline cuttings and a quarry; also for failing to keep the gates at the entrances to the inclines closed. He was fined Rs. 30.

The agent and manager of a coal mine in the Jharia coalfield were prosecuted for failing to maintain the stipulated barrier as required by the regulations. They were fined Rs. 75 and Rs. 25, respectively.

The agent and manager of a coal mine in the Jharia coalfield were prosecuted for failing to keep a correct register of persons employed underground and also for employing a larger percentage of women underground than is permitted. They were fined Rs. 50 and Rs. 10, respectively.

The agent, temporary manager and register-keeper of another coal mine in the Jharia coalfield were also prosecuted for the same offence; also a contractor, two owners, an agent, two managers and three register-keepers of three coal mines in the Raniganj coalfield. In the Jharia coalfield the agent was fined Rs. 50 and the other two Rs. 5 each. In the Raniganj coalfield the agent was fined Rs. 50; one owner was fined Rs. 50 and the other acquitted. The contractor was fined Rs. 200. The managers were fined Rs. 150 each. Two register-keepers were fined Rs. 75 each and one Rs. 50.

The owner, who was also the manager, of a tin mine in the Mergui district was prosecuted for failing to submit a notice of change of ownership of the mine, for failing to maintain a register of the persons employed in the mine who were not working on the "tribute" system and for not posting, or keeping available, copies of the prescribed abstracts of the Indian Mines Act, Regulations and Rules. He was fined Rs. 20.

The owner and manager of a tin mine in the Mergui district were prosecuted for failing to maintain and have available an inspection book, for failing to post, or have available, copies of the abstract of the Indian Mines Act, Regulations and Rules and for failing to maintain a register of the persons employed in the mine who were not employed on the "tribute" system. They were each fined Rs. 10.

The owner, who was also the manager, of a tin mine in the Mergui district was prosecuted for failing to maintain or have available an inspection book and for failing to post, or have available, copies of the abstract of the Indian Mines Act, Regulations or Rules. He was fined Rs. 20.

The chief surveyor and a surveyor of a coal mine in the Jharia coalfield were prosecuted for failing to submit an accurate plan showing the full extent of the workings of the bottom section of a seam and for failing to draw the manager's attention to the inaccuracies in the plan as a result of which a fatal accident took place in which eleven persons lost their lives. They were fined Rs. 50 each.

The agent and manager and the overman, the latter being also the register-keeper, of a coal mine in the Raniganj coalfield were prosecuted for failing to maintain the plan of the mine up-to-date within six months, for failing to maintain a correct register of the persons employed in the mine, and for employing a larger percentage of women underground than is allowed by the regulations. They were fined Rs. 25 each.

The owner who was also the manager of a steatite mine in the Hamirpur district was prosecuted for failing to have an inspection book available and for sinking a shaft through loose debris without the sides being secured. He was fined Rs. 10.

The previous manager and the acting manager of a coal mine in the Jharia coalfield were prosecuted for failing to secure two planks of a defective trolley which covered the top of a sinking shaft, so causing the death of two persons. They were both acquitted.

The owner and manager of a tin mine in the Mergui district were prosecuted for failing to submit a notice of change of manager, for failing to post, or have available, copies of the abstract of the Indian Mines Act, Regulations and Rules and for not maintaining and having available an inspection book. The owner was fined Rs. 20 and the case against the manager was withdrawn.

The owner, agent and manager of a tin mine in the Tavoy district were prosecuted for failing to step the sides of an excavation securely, for failing to provide all reasonable facilities for inspection and enquiry and for failing to appoint a competent person to supervise the workings of the mine in the absence of the manager. The case is still pending.

The owner, who was also the manager, of a mica mine in the Nellore district was prosecuted for not informing the Inspector of Mines, by telegraph, of a fatal accident which occurred in the mine and for not sending a notice thereof in the prescribed form to the District Magistrate, for failing to have the sides of the mine sloped or stepped in such a manner as to prevent danger from falls of material with the result that a fatal accident occurred; and for not appointing a competent person to be the manager of the mine. He was tried for each section separately and fined Rs. 30, Rs. 150 and Rs. 20, respectively.

The manager and overman of a coal mine in the Jharia coalfield were prosecuted, the former for failing to make and keep secure the roof of a working place and the latter for failing to see that the roof of a working place in his district was made and kept secure. They were fined Rs. 50, and Rs. 25 respectively.

The manager, mechanical engineer and two mistries of a coal mine in the Jharia coalfield were prosecuted, the manager for failing to provide manholes for refuge at the specified intervals in a new haulage incline and for failing to examine carefully the rope which broke and caused an accident resulting in the death of three persons, a serious injury to one person and minor injury to another. The mechanical engineer and the two mistries were prosecuted for failing to make a proper examination of the haulage rope which broke and caused the accident. The manager was fined Rs. 300, the mechanical engineer Rs. 200 and the mistries Rs. 150 each.

The manager, the mechanical engineer and one of the mistries preferred an appeal. The conviction against the manager was sustained and the other two were acquitted.

The owner and manager of a mica mine in the Hazaribagh district were prosecuted for failing to submit notice of a fatal accident and for failing to maintain a correct register of persons working in the mine. The owner was fined Rs. 50 and the manager Rs. 150.

The manager of a coal mine in the Raniganj coalfield was prosecuted for failing to make a weekly report for a considerable time on the condition of shafts, for failing to make monthly reports on the condition of coupling chains and drawbars, and for failing to keep the exposed and dangerous parts of the underground haulage engine fenced or guarded. He was fined Rs. 100.

The owner and manager of a stone mine in the Sonthal Parganas district were prosecuted for failing to slope, step or secure the sides of an open working so as to prevent danger from falls of material; and for failing to write or have written by a competent person a full and accurate report of the result of the inspection of all working parts of the mine. The owner was fined Rs. 51 and the manager Rs. 20.

The owner, agent and manager of a mica mine in the Hazaribagh district were prosecuted for failing to make proper arrangements for persons descending or ascending the mine; for failing to make the shafts of the mine safe with suitable timber or other means of support and for failing to fence the prospecting shafts. They were fined Rs. 50 each.

The agent and manager of a mica mine in the Hazaribagh district were prosecuted for failing to slope or step back the sides of an excavation properly, for failing to maintain a full and accurate report of the result of the inspection of the workings of the mine, and for failing to maintain a register of work-persons according to the rules. They were fined Rs. 50 each.

The agent and manager of a coal mine in the Raniganj coalfield were prosecuted for failing to produce an adequate amount of ventilation in the mine, and for failing to fence the entrances to a number of abandoned areas. The manager was fined Rs. 275. The agent was acquitted.

The owner of a coal mine in the Raniganj coalfield was prosecuted for failing to fence the old shafts and an incline. He was fined Rs. 50.

The manager of a mica mine in the Hazaribagh district was prosecuted for failing to slope, step or secure the sides of a working place in such a manner as to prevent danger from the sides failing. He was sentenced to two months' rigorous imprisonment and a fine of Rs. 250.

The managing director, temporary manager and register-keeper of a mica mine in the Hazaribagh district were prosecuted—the two firstnamed for failing to submit a notice of a serious accident which occurred in the mine and for employing women underground in contravention of the regulations and the register-keeper for failing to keep a correct register of the persons working in the mine. The case is still pending.

The manager of a coal mine in the Raniganj coalfield was prosecuted for employing persons in the mine without having two separate outlets, for

failing to provide the winding engine with a proper brake, and for failing to provide a proper fence at the top of a pit. He was fined Rs. 75.

Thirteen prosecutions against eleven owners and two agents were instituted for failure to submit annual returns within the prescribed date. Seven owners and the two agents were convicted and fines aggregating Rs. 210 were imposed. Two owners were warned, one was acquitted, and the case against one was withdrawn.

Information was received of the following prosecutions instituted by mine officials against subordinate staff :—

A trammer of a coal mine in the PENCH VALLEY coalfield was prosecuted for riding on a set of tubs on a haulage road without authority to do so. He was fined Rs. 3.

Five other trammers and a miner in coal mines in the PENCH VALLEY coalfield were prosecuted for the same offence. The trammers were fined Rs. 10 each and the miner Rs. 5.

A shot-firer of a coal mine in the PENCH VALLEY coalfield was prosecuted for having shots fired by unauthorised persons and for failing to give the "clear off" warning before the shot-firing was done. He was fined Rs. 5 on the first charge and Rs. 10 on the second.

The owner and manager of a coal mine in the Raniganj coalfield were prosecuted for failing to give notice of a serious accident to a miner. The manager was fined Rs. 20 and the owner was acquitted.

Three loaders in a coal mine in the PENCH VALLEY coalfield were prosecuted for removing a fence and a danger signal and going to work in a prohibited area along with three other loaders with the result that an accident occurred and three of them lost their lives. They were fined Rs. 10 each.

A miner in a coal mine in the PENCH VALLEY coalfield was prosecuted for entering with another miner into a prohibited area which was fenced with a view to taking out coal with the result that an accident occurred and the other miner was fatally injured. The accused was fined Rs. 10.

A shot-firer in the PENCH VALLEY coalfield was prosecuted for not warning the miners and leaving his working place before he had dressed down the roof coal and made the place safe after he had fired two shots, with the result that an accident occurred and a miner was killed. He was fined Rs. 15.

A set-rider in a coal mine in the Raniganj coalfield was prosecuted for allowing an unauthorised set-rider to ride on a set of tubs, with the result that an accident occurred and the unauthorised set-rider was fatally injured. He was sentenced to six months' rigorous imprisonment. An appeal was preferred by him, but it was dismissed.

Two onsetters in a coal mine in the PENCH VALLEY coalfield were prosecuted for failing to affix a drag on a set of tubs which were being sent up a haulage incline, with the result that as the hook coupling between the first and second tubs drew straight the tubs ran wild and an accident occurred in which a tub-checker was killed. They were fined Rs. 5.

A trammer of a coal mine in the Pench Valley coalfield was prosecuted for failing to work the run-away switch and thereby endangering the lives of the labourers working there. He was fined Rs. 5.

Two shot-firers in a coal mine in the Pench Valley coalfield were prosecuted for stemming shot-holes with coal ash and rubble instead of with clay. They were fined Rs. 10 each.

Two miners in a coal mine in the Lakhimpur district were prosecuted for fighting inside the mine. They were fined Rs. 5 each.

A shot-firer in a coal mine in the Pench Valley coalfield was prosecuted for allowing shot firing to be done by unauthorised persons. He was fined Rs. 5.

A permanent way labourer of a limestone mine in the Bilaspur district was prosecuted for attaching, along with another labourer, a loaded tub to the brake van of a locomotive and sitting on it, with the result that the sleepers loaded in the tub began to fall out and the other labourer getting nervous jumped from the tub and lost his life. He was acquitted.

A miner of a coal mine in the Pench Valley coalfield was prosecuted for travelling on a haulage road which was closed for all people and also for travelling on the road when the rope was in motion. He was fined Rs. 4.

A haulage attendant of a coal mine in the Jharia coalfield was prosecuted for leaving his post and permitting an unauthorised person to act in his place with the result that proper precautions were not taken and a serious accident occurred to a line attendant. He was fined Rs. 30.

AMENDMENTS TO THE INDIAN MINES ACT AND TO THE REGULATIONS, RULES AND BYE-LAWS MADE UNDER THE ACT.

In Notification No. 1952-T., dated the 21st February 1935, issued by the Government of India, Railway Board, the approval of the Governor-General in Council was accorded to the exemption from the provisions of the Indian Railways Act, 1890 (IX of 1890), of any sidings and lines in or adjacent to or belonging to a mine which come within the definition of "mine" under the Indian Mines Act, 1923 (IV of 1923). The notification is reproduced in Appendix IV, Statement No. 3.

In Notification No. 82, dated the 9th April 1935, the Government of Burma made certain further amendments of the rules. The notification is reproduced in Appendix IV, Statement No. 4.

In Notification No. 18452, dated the 11th May 1935, issued by the Government of Punjab, the Governor in Council was pleased to direct that in every mine where 25 or more persons are employed, latrine and urinal accommodation shall be provided on the surface, subject to certain conditions. The notification is reproduced in Appendix IV, Statement No. 5.

Act No. V of 1935.—An Act further to amend the Indian Mines Act, 1923, came into force on 1st October 1935. Printed copies are available by purchase from the Manager of Publications, Civil Lines, Delhi.

In Notification No. M.-1051, dated the 1st October 1935, issued by the Government of India, Department of Industries and Labour, the Governor-General in Council was pleased to exempt in supersession of Notification No. M.-665, dated the 16th April 1930, and of all notifications amending the same, the mines, group of mines, classes of mines, parts of mines and classes of persons specified in the first column of the annexed schedule from the provisions of the Indian Mines Act, 1923 (IV of 1923), and the Indian Mines (Amendment) Act, 1935 (V of 1935). The notification is reproduced in Appendix IV, Statement No. 6.

In Notification No. M.-1051, dated the 11th December 1935, issued by the Government of India, Department of Industries and Labour, the approval of the Governor-General in Council was accorded to certain amendments in the schedule of the above notification. The notification is reproduced in Appendix IV, Statement No. 7.

By the end of the year bye-laws under Section 32 of the Act had been established at five hundred and ninety-four coal mines and thirteen mines other than coal.

During the year five circular letters were issued to owners, agents and managers of coal mines. They are reproduced in Appendix IV, Statements Nos. 8 to 12.

SECTION V.—GENERAL REMARKS.

UNDERGROUND FIRES.

In my Annual Report for the year 1933 I mentioned a fire which had been started in a colliery in the Jharia coalfield belonging to the Kusunda group due to the dumping of heated soft coke rejections in an old quarry. This fire during 1935 extended very considerably and during the latter part of the year traversed the old abandoned workings in three different seams belonging to no less than five adjacent collieries. It also threatened the workings under a large river known as the Kari Jore. Steps were taken by several large coal concerns owning the adjoining collieries to stabilise the jore. A great deal of work was done by flushing "mutty" and sand through bore-holes in the river bed into the workings. Additional "mutty" was flushed through openings in the bank of the river and in subsided parts. Most of this packing was done in Nos. 11 and 12 seams but some was also done in No. 13 seam, the workings of which also extended under the river. It is not yet finally known whether the efforts to stabilise and support the river bed will be completely successful, but the work promises well.

The fire at the Khas Jharia group of collieries has also extended in one direction and was very active during the monsoon. So far however it has not extended to collieries which are working.

An outbreak of spontaneous combustion occurred in an old ashheap which had been dumped on broken ground due to excavations in seams underneath. This occurrence took place in the Joyrampur group of collieries. Efforts were made and are still being made to dig the ash out but owing to its great size the work has not yet been completed.

The emergency safety regulations for coal mines to which reference has been made in connection with the description of the accident at Bagdigi colliery deal not only with underground fires but also with workings under rivers, and the prevention of the dumping of ashes and heated rejections from the manufacture of soft coke in quarries, exposed outcrops of seam and on surfaces broken by the excavation of coal.

The solution of the problems which arise from underground fires in coal mines is, however, mainly dependent upon a system of packing the space from which the coal is removed by incombustible material and this aspect of the question is under the consideration of Government.

HEALTH AND SANITATION.

The Asansol Mines Board of Health held four special and eleven ordinary meetings during the year. Dr. L. Sen was the Chief Sanitary Officer to the Board throughout the year. The birth-rate in the Mining Settlement fell from 29·1 in 1934 to 21·3 per thousand in 1935. The health of the mining population was on the whole satisfactory. The general death-rate for all ages was lower than that of the preceding year, being 21·3 against 22·3 per thousand. There was considerable decrease in the infant mortality rate from 169·4 per thousand in 1934 to 146·5 in 1935. Deaths from fevers including malaria showed appreciable decline compared to the previous year. The total sickness, as registered in the colliery dispensaries, was appreciably less during the year—the monthly sickness rate fluctuating between 4·6 per cent. to 7·2 per cent. in 1935 against a range of 5·0 to 9·8 per cent. in 1934.

Cholera in epidemic form made its appearance towards the middle of March, reached its peak in July and August and declined during the fourth quarter. There were 1,144 attacks and 616 deaths during the year as against 355 attacks and 151 deaths during the previous year. The unusual shrinkage of water supply due to deficient rainfall in 1934 followed by delayed rains in 1935 was responsible for the spread of the epidemic and the tenacity with which it prevailed in the Mining Settlement, which is constantly exposed to imported infection from outside by frequent migration of labour. The movement of the mining population from place to place within the Mining Settlement determined to a large extent the route of spread of infection. Detailed measures were taken to control the epidemic. The provisions of the Cholera Regulations were enforced in order to keep each outbreak in check and prevent overflow of infection to neighbouring areas. Inoculation was carried out on a large scale—the total number done being 104,751 of which 5,600 were in villages, and 40,000 in collieries—as against a total of 73,819 in 1934. The municipal towns and industrial areas like Kulti and Burnpur were comparatively free from cholera because of piped water supply. At the instance of the Board of Health, a sketch project was undertaken by the Chief Engineer, Public Health Department, to explore the possibility of piped water supply from Damodar river to the more important areas in the coalfield. There were 123 attacks and 20 deaths from small-pox during the year, as against 130 attacks and 23 deaths during the previous year. There was no large-scale epidemic—the disease being prevalent during the pre-monsoon season. 43,944 vaccinations were performed during the year of which 14,642 were primary and 29,302 were re-vaccinations.

The temporary small-pox regulations were in force throughout the year. A travelling health exhibition was arranged in eight mining areas where a local Baby Show was also held. Health competitions, preceded by preliminary training among boys and girls, included first-aid, ambulance, home-visiting, mother-craft and health essay. A stimulus was given to re-training of mining staff in ambulance by arranging an inter-colliery ambulance competition.

The leprosy campaign was reorganised during the year. The medical personnel was provided by the Board of Health while the maintenance of the clinics was undertaken by the local Leprosy Relief Association. Two new clinics were opened during the year. This brings the total to 11 and provision has been made for three more with a view to serving the entire mining population. Twelve trained health visitors have been appointed by the Association for detailed survey, educative propaganda and home-visiting of lepers. A Leper Day was organised by the Association and the contribution to the day's collection by sale of flags came to over ten thousand rupees.

Anti-malaria work was carried out in two highly malarious areas—one of which includes an important group of collieries. A definite improvement in the malariousness of the places has been noticed as a result of the campaign.

During the year the Jharia Mines Board of Health held twelve ordinary four special meetings and five joint meetings with the Jharia Water Board. Dr. P. L. Whig was Chief Medical Officer throughout the year. The estimated population of the Settlement was 544,539 persons. The death rate was 20·43 per thousand, as compared with 18·27 in the previous year. Along with the rest of the province, the coalfield suffered from an outbreak of cholera, there being 893 cases with 447 deaths, as compared with 916 cases with 413 deaths in the previous year. The number of deaths on the collieries from cholera was 42, as compared with 51 in the previous year. The total number of anti-cholera inoculations performed was 26,437. There were 1,186 cases of suspected small-pox with 58 deaths, as compared with 959 cases with 71 deaths in the previous year. Four hundred and forty-five samples of food were analysed in the Board's laboratory and prosecutions were ordered in all cases of adulteration. With a view to improve the colliery housing still further, the moratorium granted in 1926 was withdrawn with effect from 1st April 1935, and all collieries were requested to remodel one-fifth of their non-standard houses to Board's standards. Subjects chosen for propaganda work were leprosy, maternity and child welfare, general hygiene and sanitation and ventilation in the mines. Anti-leprosy work was extended by the opening of a new fully equipped centre at Pandra.

INSPECTIONS MADE BY MEDICAL OFFICERS AS *EX-OFFICIO* INSPECTORS OF MINES.

Inspections of mines were made by medical officers as *ex-officio* Inspectors of Mines in Bihar and Orissa, Burma, Central Provinces, Madras and the Punjab. In Bengal inspections of mines were made by the Chief Sanitary Officer to the Asansol Mines Board of Health and in Assam certain mines

were inspected by the Civil Surgeons, Lakhimpur and Naga Hills districts. Considerable improvement in the sanitary conditions at many of the mines was effected by these inspections.

STATISTICS OF RAINFALL.

Statistics of rainfall in the eastern coalfields have been recorded as follows :—

	Rainfall in inches.	
	1935.	1934.
Jharia Coalfield—		
Jealgora	54·35	42·33
Topohanchi	47·59	46·26
Raniganj Coalfield—		
Asansol	47·90	44·46
Dishergarh	31·54	..
Giridih Coalfield—		
Giridih	40·48	51·49

A feature of the rainfall in 1935 was an exceptionally heavy fall on the 11th and 12th August which resulted in the rivers in the coalfields rising to unprecedented levels. A number of mines in both the Jharia and Raniganj coalfields were flooded.

AMBULANCE WORK.

Classes in First-Aid to the injured were held at eleven centres in the Jharia coalfield and also in the mining areas of Singbhum and Sambalpur. In all 169 persons attended the classes and 117 certificates were awarded. In the Raniganj coalfield classes were held at five centres; 116 persons attended, 111 completed the course and 92 were awarded certificates.

An ambulance competition for teams for collieries was carried through. Seventeen teams entered for the competition and first place was awarded to a team from Sitalpur colliery.

I wish to express my thanks to the lecturers and examiners for the work performed by them during the year in the Jharia and Raniganj coalfields, and also in the other districts.

Instruction in First-Aid to the injured was also given in mining centres of importance in other parts of India.

MINING BOARDS IN BENGAL, BIHAR AND ORISSA AND THE CENTRAL PROVINCES.

The Bengal Mining Board held only one meeting during the year. Among the subjects discussed at the meeting and by correspondence were :— (a) draft form for the preparation of the electoral rolls of the Coal Mining Labour Constituencies in connection with representation of Coal Mining

Labour in the Provincial Legislative Council under the reformed constitution; (b) final recommendations of the Coal Dust Committee; and (c) prohibition of the employment of women underground in mines. The non-official members of the Board were Messrs. P. S. Keelan, C.I.E., A. L. Ojha and Rai Sahib Upendra Nath Mandal.

The Bihar and Orissa Mining Board held one meeting during the year. The subjects dealt with at the meeting and by correspondence were:— (a) prohibition of the employment of women underground in mines; (b) final recommendations of the Coal Dust Committee; and (c) appointment of members of the Bihar and Orissa Mining Boards to represent the interests of miners. The non-official members of the Board were Messrs. J. B. Argyle, A. L. Ojha and J. Mackie.

The non-official members of the Mining Board for mines other than coal mines in Bihar and Orissa were Messrs. G. A. Young and F. G. Percival.

The Central Provinces Mining Board held no meeting during the year. The subjects dealt with by correspondence were:— (a) prohibition of the employment of women underground in mines; and (b) final recommendations of the Coal Dust Committee. The non-official members of the Board were Messrs. L. H. Bartlett, O.B.E., D. M. Nargolwalla and G. Llewelin.

BOARD OF EXAMINERS.

Five meetings of the Board of Examiners were held during the year. The non-official members of the Board were Messrs. J. Mackie, N. N. Sarkar and J. B. Wardlaw during the first four meetings. Mr. L. A. Jacobs acted as a member of the Board for the last meeting *vice* Mr. J. B. Wardlaw who had retired. The local examiners appointed were Messrs. Jas. E. Phelps and L. Millar for coal mine managers' first class certificates; Messrs. W. B. Penman and S. C. Ghosh for coal mine managers' second class certificates, and Mr. A. Mack for the examination for coal mine surveyors' certificates. Mr. N. Barraclough, Inspector of Mines, was also an examiner and acted as secretary for all the examinations.

Eight first class certificates of competency to manage a coal mine were granted in lieu of British certificates of the same class. At the examinations for coal mine managers' certificates held at Dhanbad in February, 73 candidates sat for first class certificates and 59 for second class certificates. Twenty certificates of the first class and twelve of the second class were granted. One surveyor's certificate was granted in lieu of a British certificate of the same class. At the examination for coal mine surveyors' certificates of competency held at Dhanbad in November, 28 candidates attended the examination. Four of them were successful. During the year one duplicate first class manager's certificate in lieu of a British certificate of the same class and one duplicate second class manager's Indian certificate of competency were issued.

Three hundred and forty-one persons were examined for coal mine sirdars' certificates of competency and 266 certificates were granted. Out of 386 holders of sirdars' certificates examined in gas-testing 254 were successful and their certificates were duly endorsed to that effect. 811 holders of sirdars' certificates appeared for re-examination in eyesight and hearing,

792 were successful and their certificates were duly endorsed. Under Coal Mines Regulation 49 the certificates of four sirdars were suspended for periods varying from three months to one year. During the year 24 duplicate sirdars' certificates and 70 duplicate discs were issued.

The approval of the Board was accorded to the recognition, for the purposes of Coal Mines Regulation 38, of the Benares Hindu University in respect of its B.Sc. degree in mining.

Mining Education.

At the Indian School of Mines, Dhanbad, the number of students on the roll at the end of the session 1934-35 was 54, and the same number at the beginning of the session 1935-36. The Diploma of Associateship and the Certificate examinations were held in July 1935 and the results were as follows :—

Diploma or Certificates.	No. of candidates.	No. of successful candidates.
Diploma of Associateship in Geology	1	1
Diploma of Associateship in Mining Engineering	6	6 (2 in Class I ; 4 in Class II).
Certificate in Geology	4	4
Certificate in Coal Mining	7	7
Certificate in Metal Mining	1	1

The mine surveying camp was pitched at Pootkee colliery during the month of November 1935, and 33 students of the second, third and fourth years were in attendance. Visits and tours of inspection were paid to the mica mines of Kodarma, the copper and iron mines of Singhbhum and to many local collieries and places of geological interest in the neighbourhood. At the Department of Mines examinations held during the year twelve former students obtained the first class coal mine managers' certificates and ten obtained the second class coal mine managers' certificates. Seven students obtained the certificate of competency as surveyors.

In the Department of Mining and Metallurgy at the Benares Hindu University there were 84 students on the roll at the commencement of the session 1935-36. Four students passed the final examination for the degree of B.Sc. in mining and ten in metallurgy. Up-to-date the total number of mining graduates is 25, and the total number of metallurgy graduates 35. During the summer vacation 34 students were sent to various mines and works for practical training.

No advanced evening classes in mining were held in the Raniganj coal field. Such classes, however, continued to be held under the auspices of the Government of Bihar at Jharia and Sijua in the Jharia coalfield. The total number of students attending the classes at these two centres was 47 as against 51 in the previous year. Twelve of the third year students (as against eleven in the previous year) appeared at the final examination and

eight (as against six in 1934) were successful. In both coalfields courses of lectures were delivered in the vernacular to overmen and sirdars—in the Raniganj coalfield in Bengali and in the Jharia coalfield in Hindi. The number of centres in the Raniganj coalfield was eight and 167 enrolled for this course. In the Jharia coalfield, there were five centres with a total enrolment of 220. Classes in gas-testing were also held at Sitarampur and Jamuria in the Raniganj coalfield and at Jharia in the Jharia coalfield for the training of colliery sirdars and shot-firers in gas-testing. The number of candidates enrolled for these classes was 65 in each of the provinces. Special classes in mine surveying preparatory for the examination for the mine surveying certificates of competency were held at Jharia from the middle of August to the middle of October.

Evening mining classes were also held at Barkui in the Pench Valley coalfield of the Central Provinces. The number of students enrolled was as follows :—

Advanced classes	12
Elementary classes	10

The regularity of attendance of students was a feature of the session, pointing to the fact that students were really appreciative of the opportunity given them of learning the theory of their occupation.

SCIENTIFIC AND TECHNICAL ASSOCIATIONS.

(a) *Mining and Geological Institute of India.*

The total membership, including subscribers, of the Mining and Geological Institute of India at the end of the financial year of the Institute, *i. e.*, on the 31st October 1935, was 340. In addition to the annual meeting, two ordinary general meetings were held for the reading and discussion of papers, and a geological excursion was made to the Barakar river section, about three miles beyond Tundi. Visits were also paid to the East Indian Railway and Bengal Nagpur Railway Joint colliery at Bakaro, to H. M. V. Gramophone factory at Dum Dum and to the Pottery Works of Messrs. Burn and Company, Limited. In addition, illustrated lantern lectures were delivered by Dr. C. S. Fox, Messrs. P. Evans, J. Eden, W. D. West and Dr. A. L. Coulson, the subjects of the lectures being "The Movement of Underground Waters, including radio-active waters and mineral springs", "The Quest for Oil", "Aerial Survey", "The Quetta Earthquake of 1935" and "Meteorites", respectively.

Three parts of the Transactions were published. The Government of India prize and the Institute gold medal were awarded to Professor C. Forrester for his paper on "A study of the Barakar Coals of the Jharia Coalfield", the Institute silver medal to Dr. M. S. Krishnan for his paper on "The Economic Minerals, of Gangpur State, Bihar and Orissa". The Pickering medal presented by the Institute for the best student in mining at the Indian School of Mines was awarded to Mr. N. S. Claire and the Hayden medal for the best student in geology was awarded to Mr. N. C. Nandy.

The Subsidence Committee has collected a considerable amount of valuable information and the report is being prepared for final submission to the Institute.

(b) The National Association of Colliery Managers (Indian Branch).

The number of members of the National Association of Colliery Managers, Indian Branch, at the beginning of the year was 83. Some of the subjects dealt with by the Council during the year were:—(1) professional safeguards; (2) withdrawal of female labour from underground; (3) definition of colliery "Agents"; (4) prosecution of colliery managers under Penal Code; (5) whitewashing of dhowrahs; (6) payment of Wages Bill; and (7) Indian Mines (Amendment) Act, 1935. No paper of technical interest was read during the year. Mr. J. T. Caldwell represented the Association on the Jharia Mines Board of Health and Mr. W. McDonald on the Asansol Mines Board of Health. Mr. B. Starks Field represented the Association on the Subsidence Committee of the Mining and Geological Institute of India.

(c) The Indian Mine Managers Association.

The membership of the Indian Mine Managers Association at the end of the year was 205. Among the subjects dealt with during the year were:—(1) statutory qualifications of "Agents" (2) issue of summons to colliery managers; (3) compensation under the Act for managers and assistant managers; (4) amendments of the Indian Mines Act; and (5) enquiries into accidents under section 21 of the Indian Mines Act. Excursions were arranged to Messrs. Bengal Iron Company, Limited's Nunodih and Jitpur collieries and Messrs. The Equitable Coal Company, Limited's West Jamuria Colliery. A paper on "The Electrical Installation in a small colliery" by Mr. J. Goswami was read and discussed, while Professor S. K. Bose delivered a lecture on "Mining in the East". Mr. B. K. Bose represented the Association on the Jharia Mines Board of Health, the Subsidence Committee and the Soft Coke Research Committee; Mr. M. M. Mukherjee on the Asansol Mines Board of Health; Mr. J. K. Dholakia on the Mining Education Advisory Board and the Dhanbad Leprosy Relief Association; Mr. N. Ghose on the Asansol Leprosy Relief Association and Mr. K. K. Baksi on the Society for the Prevention of Cruelty to Animals. Mr. Baksi also acted as Honorary Secretary of the Railways and Collieries Advisory Board.

(d) The Railways and Collieries Advisory Board.

The Board consisting of officials of the East Indian and Bengal Nagpur Railways and the collieries held three meetings during the year when various matters of interest to both the railways and collieries were discussed.

LABOUR ASSOCIATIONS.

(a) The Indian Colliery Labour Union.

This Union is registered under the Indian Trade Union Act, 1926, and has its headquarters at Jharia, Bihar and Orissa. The total number of members on the roll is 7,975. The bulk of the members are miners although some are skilled and unskilled manual labourers and also clerical staff. The rates of subscription varies from one anna to four annas per month. The Union claims to have assisted workmen in connection with compensation and wage dispute cases. It has also conducted lantern lectures in various collieries on temperance, hygiene, sanitation, maternity and child welfare schemes. The work of the Union is stated to have been carried out in co-operation with the Tata's Collieries Labour Association.

(b) The Tata's Collieries Labour Association.

This Association is also registered under the Indian Trade Union Act, 1926. While its activities are mainly concerned with workers employed at the Tata Iron and Steel Company, Limited's collieries in the Jharia coalfield it works in co-operation with the Indian Colliery Labour Union. It has on its roll 1,979 members, mainly miners and manual workers. The rates of subscription vary from one anna to Re. 1-8-0 per month.

(c) The Indian Miners' Association.

This Association which is also registered under the Indian Trade Union Act, has its head office at Jharia, Bihar and Orissa. The number of members is stated to be about 3,200. The Association is affiliated with the National Trades Union Federation, Bombay. The rate of subscription is from one anna to four annas per month according to scales of pay and wages. The Association has taken interest in welfare work, rates of wages, the extent of drinking amongst the miners, compensation and wage disputes.

VISITOR TO THE COALFIELDS.

The Hon'ble Mr. Syed Abdul Aziz, Bar-at-Law, Minister of Education, Bihar and Orissa, visited the Jharia coalfield in November. He visited the Jharia Mining Lecture Hall accompanied by the Chief Inspector of Mines. Visits were also paid to the Indian School of Mines at Dhanbad and the Topchanchi reservoir.

OFFICIAL DUTIES, 1935.

Dr. D. Penman was Chief Inspector of Mines and as a temporary measure continued to hold charge of the post of Principal, Indian School of Mines. He was on leave out of India from 1st to 12th January.

Mr. J. H. Lang, Inspector of Mines, officiated as Chief Inspector of Mines from 1st to 12th January. He was Inspector of Mines, without circle, from 13th January to 15th March and held charge of No. 2 Circle from 25th October to the end of the year. He was on leave out of India from 16th March to 24th October.

Mr. W. Kirby was Inspector of Mines, No. 1 Circle, throughout the year.

Mr. N. Barraclough, Inspector of Mines, held charge of No. 2 Circle from 1st January to 24th October, and as Inspector without circle to the end of the year.

Mr. H. M. Mitra was Electric Inspector of Mines throughout the year.

Mr. G. S. Cameron, Junior Inspector of Mines, No. 2 Circle, was on leave out of India from 2nd April to 5th November.

Mr. N. G. Chatterjee, Junior Inspector of Mines, No. 2 Circle, was on duty throughout the year.

Mr. H. K. Chatterjee, Junior Inspector of Mines, No. 1 Circle, was on duty throughout the year except for a period of leave from 2nd to 9th January.

Mr. A. Young, Junior Inspector of Mines, No. 1 Circle, was on duty throughout the year.

Mr. V. S. Chopra, Assistant Inspector of Mines, No. 2 Circle, was on duty throughout the year.

Mr. S. S. Grewal, Assistant Inspector of Mines, No. 1 Circle, was on duty throughout the year.

The number of coal mines worked during the year was 494, which is 4 more than in the previous year. The number of metalliferous (including stone, etc.) mines at work was 1,318, as compared with 1,185 in 1934.

During the year, 1,172 mines were inspected, many of them being inspected several times; 3,315 separate inspections were made. On the suggestion of the Revenue Commissioner in Baluchistan who stated that most of the coal mines in Baluchistan had been closed down as a result of the Quetta earthquake, the Baluchistan mines were not included in the annual tour of the mines in Northern India. The cause and circumstances of nearly all fatal accidents and serious accidents of importance, and all complaints of breaches of regulations and rules were investigated. Many inspections were made at the invitation of mineowners, superintendents or managers desirous of obtaining advice on safety matters. In the major coalfields a large proportion of the time of the Inspectors is occupied in investigating cases of actual or threatened damage to dwelling houses and roads by reason of the underground working of coal mines, in dealing with underground fires, and in examining protective works against the risk of inundation. In addition a large number of inspections of the sanitary conditions at mines were made by medical officers as *Ex-officio* Inspectors of Mines.

Orders were issued as follows :—

Section, Regulation or Rules.	Number of Orders.
Under Section 19 (2)	3
Under Coal Mines Regulations 23 (c) and 23 (3) (d)	4
Under Coal Mines Regulation 76 (2)	1
Under Coal Mines Regulation 89	1
Under Metalliferous Mines Regulation 21	1

Exemptions, partial or complete, and permissions were granted as follows :—

Regulation.	Number of cases.
Under Coal Mines Regulation 76 (2)	1
Under Coal Mines Regulation 116	2
Under Coal Mines Regulation 123	3
Under Metalliferous Mines Regulation 74	4

Information was received of ten underground fires, two ignitions of inflammable gas, and fourteen irruptions of water.

The number of original cases under the Land Acquisition (Mines) Act, 1885, at the end of 1935 stood at 706, twenty-one of which were cases dealt with during the year. There were eleven applications for modifications of restrictions, all of which were dealt with. The Act applies to Bengal and Bihar and Orissa only. In other provinces where Government owns the minerals, Local Governments were advised as to the restrictions necessary in cases where mineowners sought permission to work minerals beneath railways, villages, etc.

I have the honour to be,

Sir,

Your most obedient servant,

D. PENMAN,

Chief Inspector of Mines in India.

APPENDIX I.

Statistics of Mines and Minerals.

Table No. 1.

APPEN
STATISTICS OF MINES

Table
Number of workers and output of minerals during the

Provinces.	District and Mineral field.	Total Output.	Average number of							
			Underground.						Total Males and Females.	
			Males.							
			Overmen and Sirdars.	Coal-cutters.	Loaders	Other skilled labour.	Other unskilled labour.	Total Males.		Females
		Tons.								CO
Assam	Khasi and Jaintia Hills	1,077	5	25	13	...	...	43	...	43
	Lakh Impur, Makum coalfield	190,677	63	239	315	234	284	1,384	...	1,184
	Naga Hills, Nazira ..	21,076	10	25	23	32	35	125	...	126
	Total	210,830	77	289	351	266	319	1,302	...	1,301
Baluchistan	Quetta-Pishin, Sor Range coalfield.	1,323	5	13	19	...	...	37	...	37
	Pitj, Khust coalfield . .	3,223	6	44	32	4	...	86	...	86
	Total	4,546	11	57	51	4	...	123	...	123
Bengal	Bankura	5,115	4	27	19	2	19	62	6	68
	Birbhum	1,139	2	7	7	...	...	16	...	16
	Burdwan	6,676,304	731	16,637	6,213	3,542	6,038	32,166	3,569	36,724
	Total	6,682,751	737	16,661	6,220	3,543	6,067	32,233	3,575	36,808
Bihar and Orissa.	Manbhum— Raniganj coalfield (part of)	574,559	70	1,615	330	263	866	2,133	329	3,462
	Jharia ..	9,151,091	1,045	17,714	9,765	4,414	6,023	3,561	4,203	43,763
	Hazaribagh— Jharia coalfield (part of)	98,271	13	219	103	31	33	349	37	436
	Bokaro ..	1,331,271	33	1,156	536	124	640	2,299	122	2,421
	Girdih ..	708,789	133	3,399	1,037	236	711	5,606	200	5,796
	Karanpura ..	421,144	14	803	158	40	82	797	94	891
	Ranchi— Karanpura coalfield (part of)	3,392	1	...	...	1	...	2	...	2
	Sambalpur— Hingir Kampur coalfield	27,331	2	58	60	11	7	138	...	138
	Carried over	12,311,779	1,311	24,656	11,189	5,118	8,793	51,836	5,068	56,904

DIX I.
AND MINERALS.

No. 1.
year 1935 at mines under the Indian Mines Act.

persons employed daily in and about the mines.

Overmen and Sirdars.	Open workings.							Total Underground and Open workings.	Surface.					Grand Total.	
	Males.					Females.	Total Males and Females.		Males.				Females.		Total Males and Females.
	Coal-cutters.	Loaders.	Other skilled labour.	Other unskilled labour.	Total Males.				Clerical and supervising staff.	Skilled labour.	Unskilled labour.	Total Males.			
A.L.															
...	...	...	...	..	..	...	..	48	0	...	30	30	10	54	97
...	...	...	...	...	...	...	...	1,134	16	134	163	302	60	300	1,524
...	...	...	...	..	...	...	...	138	12	25	25	82	...	63	207
...	...	...	...	...	...	...	...	1,303	34	150	237	420	100	526	1,829
...	...	...	...	...	...	...	...	37	...	...	...	...	...	...	37
...	...	4	...	...	4	...	4	90	...	1	...	1	...	1	91
...	...	4	...	...	4	...	4	127	...	1	...	1	...	1	128
1	4	3	2	3	12	5	17	85	4	5	5	14	7	21	100
...	...	...	...	...	...	...	...	16	1	2	2	5	1	8	23
11	24	8	21	28	103	20	129	35,843	1,268	2,607	6,190	10,352	2,581	13,023	40,786
12	38	11	23	30	114	31	145	36,063	1,270	3,004	6,197	10,371	2,569	13,000	40,913
9	80	14	19	31	153	60	223	3,678	113	324	415	853	276	1,328	4,906
40	468	131	49	306	604	380	1,374	45,037	1,544	2,687	10,317	16,548	6,619	21,167	66,204
1	2	1	...	10	14	12	26	462	36	48	138	213	114	310	768
31	1,723	928	67	1,407	4,156	830	4,986	7,407	210	380	1,068	1,607	316	1,923	9,390
3	70	9	4	4	90	60	150	5,946	96	166	662	924	315	1,239	7,185
1	335	53	263	100	732	188	920	1,011	54	206	281	540	131	601	2,473
1	22	...	1	...	24	3	27	20	1	1	15	17	4	21	50
...	...	...	...	...	...	...	...	138	...	21	18	30	13	52	190
86	2,690	1,138	303	1,758	6,063	1,842	7,905	64,508	2,034	4,681	12,934	19,799	6,878	26,677	91,185

APPEN
STATISTICS OF MINES

Table
Number of workers and output of minerals during the

Province.	District and Mineral field.	Total Output.	Average number of							
			Underground.							
			Males.						Females.	Total Males and Females.
			Overmen and Sirdars.	Coal-cutters.	Loaders.	Other skilled labour.	Other unskilled labour.	Total Males.		
		Tons.								CO
Bihar and Orissa—contd.	Brought forward	12,311,779	1,311	24,055	11,089	8,118	8,763	51,835	5,068	56,903
	Southal Parganas—									
	Jaintry coalfield	81,037	16	133	33	32	33	297	24	321
	Raniganj coalfield (part of).	91,013	20	371	14	46	55	506	44	550
	Total	12,434,839	1,347	25,159	12,086	8,196	8,850	53,638	5,136	57,774
Central Provinces.	Betal . . . . .	..	1	...	...	...	17	18	...	18
	Chanda	812,591	35	1,168	643	74	340	2,259	175	2,433
	Chhindwara, Pench Valley coalfield.	1,214,009	96	3,381	1,180	563	877	6,117	500	6,707
	Total	1,526,600	132	4,547	1,823	657	1,234	8,393	765	9,158
Punjab	Jhelum, Salt Range coalfield	61,848	34	289	177	119	207	828	...	828
	Mianwali	77,073	18	128	128	17	74	365	...	365
	Shahpur	5,507	2	24	...	3	10	39	...	39
	Total	144,428	54	440	305	139	291	1,229	...	1,229
	Grand Total (Coal) for 1935.	21,014,469	2,358	46,163	20,846	9,810	16,751	86,916	9,476	105,394
	Grand Total of preceding year.	20,242,977	2,263	44,065	19,133	9,219	15,310	80,089	11,058	101,017
	Difference	+770,492	+95	+2,098	+1,713	+591	+1,441	+5,929	-1,582	+4,347

DIX I—*contd.*AND MINERALS—*contd.*No. 1—*contd.*year 1935 at mines under the Indian Mines Act—*contd.*

persons employed daily in and about the mines.

Overmen and Sirdars.	Open workings.							Total Underground and Open workings.	Surface.						Grand Total.	
	Males.					Females.	Total Males and Females.		Males.				Females.	Total Males and Females.		
	Coal-cutters.	Loaders.	Other skilled labour.	Other unskilled labour.	Total Males.				Clerical and supervising staff.	Skilled labour.	Unskilled labour.	Total Males.				
A.L.— <i>contd.</i>																
85	2,690	1,136	263	1,768	6,063	1,543	7,606	64,508	2,034	4,831	12,934	19,799	6,878	26,677	91,185	
...	...	...	...	...	...	...	...	321	28	61	35	119	31	140	461	
...	...	...	...	...	...	...	...	550	20	44	90	163	61	223	773	
86	2,000	1,136	303	1,768	6,063	1,543	7,606	65,379	2,066	4,936	13,088	20,080	6,960	27,040	92,419	
...	...	...	...	...	...	...	...	18	6	...	43	40	6	55	73	
9	...	...	63	30	102	2	104	2,637	56	98	303	446	123	668	3,206	
1	28	27	2	65	123	39	161	6,968	176	555	1,263	2,294	666	3,959	9,637	
10	28	27	68	95	225	40	265	9,423	238	964	1,697	2,839	793	3,632	13,106	
3	...	9	...	...	12	...	12	637	60	56	228	343	...	343	1,179	
...	...	...	...	...	...	...	...	365	24	13	148	185	24	309	674	
...	...	...	...	...	...	...	...	30	7	5	57	60	...	60	108	
3	...	9	...	...	12	...	12	1,341	91	74	431	506	24	630	1,971	
111	2,756	1,167	481	1,663	6,418	1,613	8,031	113,425	3,719	9,028	21,610	34,357	11,472	45,829	159,254	
123	2,633	1,170	186	1,780	6,892	1,496	7,388	108,435	3,523	8,420	21,069	33,012	9,928	42,940	151,375	
-12	+123	+17	+296	+108	+526	+117	+643	+4,990	+196	+608	+541	+1,345	+1,544	+2,568	+7,879	

APPEN
STATISTICS OF MINES

Table

Number of workers and output of minerals during the

Provinces.	District and Mineral field.	Total Output.	Average number of persons employed								
			Underground.								
			Males.					Total Males.	Females.	Total Males and Females.	
			Foremen and Mates	Miners.	Other skilled labour.	Other unskilled labour.					
		Tons									
Bihar and Orissa	Singhbhum . . .	1,155,965	...	...	..	...	...	...	...	...	IRON
Burma . . .	Mandalay . . .	...	...	...	..	...	...	...	...	...	...
	Northern Shan States.	23,085	...	...	..	...	...	...	...	...	...
	Total . . .	23,085	...	...	..	...	...	...	...	...	...
	Grand Total (Iron Ore) for 1933.	1,179,050	...	...	..	...	...	...	...	...	...
	Grand Total of preceding year.	834,477	...	...	..	...	...	...	...	...	...
	Difference . . .	+344,573	...	...	..	...	...	...	...	...	...
		Tons									MANGANESE
Bihar and Orissa	Singhbhum . . .	16,667	...	...	..	...	...	...	...	...	...
Bombay . . .	Panch Mahals . . .	4,866	3	33	..	...	26	...	...	26	...

DIX I—*contd.*AND MINERALS—*contd.*No. 1—*contd.*year 1935 at mines under the Indian Mines Act—*contd.*

daily in and about the mines.

Foremen and Mates.	Open workings.					Total Males and Females.	Total Underground and Open workings.	Surface.					Grand Total.	
	Males.				Females.			Males.				Females.		
	Miners.	Other skilled labour.	Other unskilled labour.	Total Males.				Clerical and supervising staff.	Skilled labour.	Unskilled labour.	Total Males.			Total Males and Females.
ORE														
184	2,863	235	663	3,913	1,656	5,569	5,569	172	358	919	1,443	682	2,025	7,594
...	...	...	...	...	...	...	...	7	2	43	52	...	52	52
1	...	6	198	205	...	205	205	1	2	162	165	7	172	377
1	...	6	198	205	...	205	205	8	4	205	217	7	224	429
185	2,862	261	860	4,118	1,656	5,774	5,774	180	362	1,118	1,660	669	2,249	8,023
73	1,850	109	624	2,656	1,117	3,833	3,833	150	176	952	1,278	474	1,752	5,686
+62	+1,012	+152	+336	+1,463	+479	+1,941	+1,941	+30	+186	+166	+382	+115	+497	+2,438
ORE														
25	178	4	3	210	138	342	348	7	6	23	39	118	157	505
2	98	4	...	99	64	163	169	4	9	30	43	13	56	245

APPEN
STATISTICS OF MINES

Table

Number of workers and output of minerals during the

Province.	District and Mineral field.	Total Output.	Average number of persons employed							
			Underground.							
			Males.					Total Males.	Females.	Total Males and Females.
			Foremen and Matees.	Miners.	Other skilled labour.	Other unskilled labour.				
MANGANESE										
Central Provinces		Tons.								
	Balaghat . . .	236,732	15	390	...	152	557	...	567	
	Bhandara . . .	76,844	...	...	...	...	...	...	...
	Nagpur . . .	71,603	...	...	...	...	...	...	...
	Total . . .	885,179	15	390	...	152	557	...	557	
Madras	Bellary . . .	250	...	...	...	..	...	...	...
	Vizagapatam . . .	15,865	...	...	..	...	...	...	...
	Total . . .	16,135	...	...	...	...	..	...	...
	Grand Total (Manganese Ore) for 1935.	422,847	18	413	...	152	563	...	583	
	Grand Total for preceding year.	221,262	18	316	...	83	412	...	412	
	Difference . . .	+201,585	+5	+97	...	+69	+171	...	+171	

DIX I—*contd.*AND MINERALS—*contd.*No. 1—*contd.*year 1935 at mines under the Indian Mines Act—*contd.*

daily in and about the mines.

Open workings.							Total Underground and Open workings.	Surface.						Grand Total.
Males.					Females.	Total Males and Females.		Males.				Females.	Total Males and Females.	
Foremen and Mates.	Miners.	Other skilled labour.	Other unskilled labour.	Total Males.				Clerical and supervis- ing staff.	Skilled labour.	Unskilled labour.	Total Males.			
ORE—<i>contd.</i>														
69	1,818	7	390	2,304	1,844	4,148	4,705	26	35	374	435	634	1,069	5,774
54	754	...	84	892	837	1,729	1,729	6	9	206	221	160	381	2,110
51	856	8	10	927	779	1,706	1,706	21	40	194	255	124	379	2,085
194	3,400	15	464	4,123	3,460	7,583	8,140	53	84	774	911	918	1,829	9,969
2	3	6	2	13	4	17	17	1	16	10	27	10	37	54
22	510	4	-	536	256	792	792	8	21	23	52	5	57	849
24	513	10	2	549	260	809	809	9	37	33	79	15	94	903
245	4,214	33	489	4,961	3,922	8,903	9,486	73	136	863	1,072	1,064	2,136	11,629
109	2,461	9	127	2,708	2,076	4,782	5,194	40	71	510	621	559	1,180	6,374
+136	+1,763	+24	+362	+2,275	+1,840	+4,121	+4,292	+33	+65	+353	+451	+506	+966	+5,248

DIX I—*contd.*AND MINERALS—*contd.*No. 1—*contd.*year 1935 at mines under the Indian Mines Act—*contd.*

daily in and about the mines.

Open workings.							Total Underground and Open workings.	Surface.					Grand Total.	
Males.					Females.	Total Males and Females.		Males.				Females.		Total Males and Females.
Foremen and Males.	Miners.	Other skilled labour.	Other unskilled labour.	Total Males.				Clerical and supervising staff.	Skilled labour.	Unskilled labour.	Total Males.			
ORE.														
1	88	89	...	89	3,100	55	185	217	457	...	467	8,557
1	89	40	...	40	3,017	55	179	245	479	...	479	3,496
...	-1	-1	...	-1	+88	...	+6	-28	-22	...	-22	+61
AD.														
in those for Lead Ore.														
...
...

APPEN
STATISTICS OF MINES

Table

Number of workers and output of minerals during the

Province.	District and Mineral field.	Total Output.	Average number of persons employed							
			Underground.							
			Males.					Total Males.	Females.	Total Males and Females.
			Foremen and Mates.	Miners.	Other skilled labour.	Other unskilled labour.	Total Males.			
Burma . . .	Northern Shan States.	Tons. 1,500						ANTIMONIAL Figures included		
	Total of preceding year.	1,255	...	...	...	...	...	...	...
	Difference . . .	+245	...	...	...	...	...	...	...
Bihar and Orissa	Manbhum . . .	Ounces. 16						SIL Figures included		
Burma . . .	Northern Shan States.	5,825,913						Figures included		
	Grand Total (Silver) for 1935.	5,825,929						Figures included		
	Grand Total of preceding year.	5,792,033	...	...	...	...	...	...	...
	Difference . . .	+33,896	...	...	...	...	...	...	...
Bihar and Orissa.	Manbhum . . .	Ounces. 33	1	5	1	1	8	...	GO 8	
	Singhbhum . . .	...	...	...	...	4	4	...	4
	Total . . .	33	1	5	1	5	12	...	12	
Burma . . .	Northern Shan States.	1,222						Figures included		
	Grand Total (Gold) for 1935.	1,265	1	5	1	5	13	...	12	
	Grand Total of preceding year.	868	2	14	2	6	24	...	24	
	Difference . . .	+397	-1	-9	-1	-1	-12	...	-12	

DIX I—*contd.*AND MINERALS—*contd.*No. 1—*contd.*year 1935 at mines under the Indian Mines Act—*contd.*

daily in and about the mines.

Open workings.							Total Underground and Open workings.	Surface.						Grand Total.
Males.				Females.	Total Males and Females.	Males.			Females.	Total Males and Females.				
Foremen and Mates.	Miners.	Other skilled labour.	Other unskilled labour.			Total Males.		Clerical and supervising staff.			Skilled labour.	Unskilled labour.	Total Males.	
LEAD.														
in those for Lead Ore.														
...
...
VER.														
in those for Gold.														
in those for Lead Ore.														
in those for Gold and Lead Ore.														
...
...
LD.														
...	8	...	1	7	8	10	18	26
...	4	1	...	3	4	...	4	8
...	12	1	1	10	12	10	22	34
in those for Lead Ore.														
...	12	1	1	10	12	10	22	34
1	3	4	1	5	29	2	3	9	14	9	23	52
-1	-3	-4	-1	-5	-17	-1	-2	-1	-2	+1	-1	-18

APPEN
STATISTICS OF MINES

Table

Number of workers and output of minerals during the

Province.	District and Mineral field.	Total Output.	Average number of persons employed						
			Underground.						
			Males.					Females.	Total Males and Females.
			Foremen and Mates.	Miners.	Other skilled labour.	Other unskilled labour.	Total Males.		
Burma		Tons.							TIN
	Amherst . . .	20	...	...	...	...	...	...	...
	Mergui . . .	1,756	...	21	15	20	59	...	59
	Tavoy . . .	2,602	27	2,162	61	281	2,531	...	2,531
	Thaton . . .	5							
									Figures included
	Grand Total (Tin Ore) for 1935.	4,383	27	2,183	76	301	2,590	...	3,590
	Grand Total of preceding year.	3,890	17	1,431	112	372	1,932	...	1,932
Difference . . .	+493	+10	+752	-36	-71	+658	...	+658	
Burma		Tons.							WOLFRAM
	Mergui . . .	223							Figures included
	Southern Shan States	9	...	...	...	6	6	...	6
	Tavoy . . .	2,089							Figures included
	Thaton . . .	43	...	...	...	...	...	...	...
	Yemethin . . .	185	...	68	...	...	68	...	63
	Grand Total (Wolfram Ore) for 1935.	2,549	...	68	...	6	74	...	74
	Grand Total of preceding year.	1,333	...	...	...	...	...	...	...
Difference . . .	+1,216	...	+68	...	+6	+74	...	+74	

DIX I—*contd.*AND MINERALS—*contd.*No. 1—*contd.*year 1935 at mines under the Indian Mines Act—*contd.*

daily in and about the mines.

Open workings.					Females.	Total Males and Females.	Total Underground and Open workings.	Surface.					Females.	Total Males and Females.	Grand Total.
Males.								Males.							
Foremen and Mates.	Miners.	Other skilled labour.	Other unskilled labour.	Total Males.				Clerical and supervising staff.	Skilled labour.	Unskilled labour.	Total Males.				
ORE.															
...	10	...	96	106	26	132	132	1	1	1	3	...	3	135	
61	2,987	907	1,005	4,960	5	4,965	5,024	187	64	162	369	6	369	5,893	
98	3,337	1,338	2,663	7,436	408	7,844	10,875	163	241	334	738	4	742	11,117	
in those for Wolfram.															
159	6,334	2,245	3,764	12,503	439	12,941	15,531	301	306	497	1,104	10	1,114	16,645	
78	4,077	1,929	2,632	8,616	380	9,098	11,028	227	276	378	881	1	882	11,910	
+81	+2,257	+316	+1,132	+3,886	+59	+3,843	+4,503	+74	+30	+119	+223	+9	+232	+4,735	
ORE.															
in those for Tin Ore.															
1	...	1	2	4	...	4	10	1	1	2	4	...	4	14	
in those for Tin Ore.															
8	62	83	54	207	26	233	233	1	...	20	21	...	21	254	
...	457	...	66	523	...	523	591	13	...	267	285	2	287	378	
9	519	84	122	734	26	760	834	20	1	289	310	2	312	1,146	
...	
+9	+519	+84	+122	+734	+26	+760	+834	+20	+1	+289	+310	+2	+312	+1,146	

APPEN
STATISTICS OF MINES

Table

Number of workers and output of minerals during the

Province.	District and Mineral field.	Total Output.	Average number of persons employed						
			Underground.						
			Males.					Females.	Total Males and Females.
			Foremen and Mates.	Miners.	Other skilled labour.	Other unskilled labour.	Total Males.		
		Tons.							CHROMITE
Baluchistan	Zhob	7,642	2	15	...	...	17	...	17
Bihar and Orissa	Singhbhum . . .	11,397	...	...	...	...	...	...	...
	Grand Total (Chromite Ore) for 1935.	19,039	2	15	...	...	17	...	17
	Grand Total of preceding year.	9,356	...	...	...	...	...	...	...
	Difference . . .	+9,683	+2	+15	...	...	+17	...	+17
		Tons.							COPPER
Bihar and Orissa.	Singhbhum . . .	350,801	2	439	...	1,179	1,620	...	1,620
	Total of preceding year.	328,676	2	400	...	1,360	1,752	...	1,752
	Difference . . .	+22,125	...	+39	...	-171	-132	...	-132

DIX I—*contd.*AND MINERALS—*contd.*No. 1—*contd.*year 1935 at mines under the Indian Mines Act—*contd.*

daily in and about the mines.

Open workings.							Total Underground and Open workings.	Surface.						Grand Total.
Males.					Females.	Total Males and Females.		Males.				Females.	Total Males and Females.	
Foremen and Mates.	Miners.	Other skilled labour.	Other unskilled labour.	Total Males.				Clerical and supervis- ing staff.	Skilled labour.	Unskilled labour.	Total Males.			
ORE.														
3	70	2	10	85	...	85	102	3	1	36	40	...	40	142
55	463	162	51	731	620	1,351	1,351	24	35	16	75	36	131	1,482
68	533	164	61	816	620	1,436	1,453	27	36	52	115	36	171	1,624
48	459	58	68	633	551	1,214	1,214	17	23	21	61	49	110	1,324
+10	+74	+106	-7	+183	+39	+222	+239	+10	+12	+31	+51	-13	+61	+300
ORE.														
...	...	...	...	...	...	...	1,620	33	236	550	819	315	1,164	2,784
...	...	...	...	...	...	...	1,752	28	217	466	711	324	1,035	2,787
...	...	...	...	...	...	...	-132	+5	+19	+84	+108	+21	+129	-3

APPEN
STATISTICS OF MINES

Table
Number of workers and output of minerals during the

Province.	District and Mineral field.	Total Output.	Average number of persons employed						
			Underground.					Females.	Total Males and Females.
			Males.						
			Foremen and Mates.	Miners.	Other skilled labour.	Other unskilled labour.	Total Males.		
Burma . . .	Northern Shan States.	Tons. 8,950	COPPER Figures included						
	Total of preceding year.	11,000	...	...	...	...	...	...
	Difference . . .	-2,050	...	...	...	...	...	...
Burma . . .	Northern Shan States.	Tons. 4,850	NICKEL Figures included						
	Total of preceding year.	3,951	...	...	...	...	...	...
	Difference . . .	+899	...	...	...	...	...	...
Burma . . .	Northern Shan States.	Tons. 78,590	ZINC CON Figures included						
	Total of preceding year.	68,838	...	...	...	...	...	...
	Difference . . .	+9,752	...	...	...	...	...	...

APPEN
STATISTICS OF MINES

Table

Number of workers and output of minerals during the

Province.	District and Mineral field.	Total Output.	Average number of persons employed						
			Underground.						
			Males.				Total Males.	Females.	Total Males and Females.
Foremen and Mates.	Miners.	Other skilled labour.	Other unskilled labour.						
		Cwt.							MI
Bihar and Orissa.	Gaya	10,524	54	1,221	165	948	2,383	...	2,383
	Hazarilagh . . .	37,679	606	7,129	882	2,517	11,134	...	11,134
	Manbhum	29	...	...	...	...	...	...	...
	Monghyr	442	4	25	...	106	135	...	135
	Total	48,674	664	8,375	1,047	3,566	13,652	...	13,652
Madras	Nellore*	9,462	52	444	223	252	971	...	971
	Nilgiris	43	1	10	1	9	21	...	21
	Total	9,495	53	454	224	261	992	...	992
Rajputana	Ajmer-Merwara . .	384	2	27	...	...	29	...	29
	Grand Total (Mica) for 1935.	58,553	719	8,656	1,271	3,827	14,673	...	14,673
	Grand Total of preceding year.	55,565	602	6,741	1,587	1,800	10,730	...	10,730
	Difference	+2,998	+117	+2,115	-316	+2,027	+3,943	...	+3,943

* 3 808 cwt. of waste mica useful for

DIX I—*contd.*AND MINERALS—*contd.*No. 1—*contd.*year 1935 at mines under the Indian Mines Act—*contd.*

daily in and about the mines.

For men and Mates.	Open workings.						Total Underground and Open workings.	Surface.						Grand Total.	
	Males.					Females.		Total Males and Females.	Males.				Females.		Total Males and Females.
	Miners.	Other skilled labour.	Other unskilled labour.	Total Males.	Clerical and supervising staff.				Skilled labour.	Unskilled labour.	Total Males.				
CA.															
16	477	43	287	823	16	879	3,262	83	15	20	158	62	220	3,482	
71	825	127	215	1,238	230	1,468	12,602	403	2,459	450	3,312	483	3,795	16,397	
...	2	...	...	2	...	2	2	...	...	...	...	...	...	2
2	15	5	51	76	...	76	211	10	30	4	44	35	79	299	
89	1,319	178	553	2,139	286	2,425	16,077	496	2,544	474	3,514	580	4,094	20,171	
20	237	95	159	511	497	1,008	1,979	59	120	126	305	522	827	2,806	
...	...	...	...	...	...	...	21	..	4	6	10	1	11	32
20	237	95	119	511	497	1,008	2,000	59	124	132	315	523	838	2,836	
4	45	4	...	53	5	58	87	...	9	3	12	...	12	99	
1.3	1,601	277	712	2,703	788	3,491	18,164	555	2,677	609	3,841	1,103	4,944	23,108	
90	692	252	372	2,326	546	1,952	12,682	400	629	591	1,600	731	2,351	15,033	
+23	+909	+25	+310	+377	+242	+1,539	+5,482	+155	+2,048	+18	+2,221	+372	+2,713	+8,075	

splitting was also raised.

DIX I—*contd.*AND MINERALS—*contd.*No. 1—*contd.*year 1935 at mines under the Indian Mines Act—*contd.*

daily in and about the mines.

Foremen and Mates.	Open workings.					Females.	Total Males and Females.	Total Underground and Open workings.	Surface.					Total Males and Females.	Grand Total.
	Males.								Males.						
	Miners.	Other skilled labour.	Other unskilled labour.	Total Males.	Clerical and supervis- ing staff.				Skilled labour.	Unskilled labour.	Total Males.	Females.	Total Males and Females.		
LT.															
1	10	...	...	11	1	12	841	1	71	312	324	...	384	1,225
...	...	...	...	...	...	...	89	...	...	78	78	...	78	167
...	...	...	...	...	...	...	133	...	9	75	84	...	84	217
1	10	...	...	11	1	12	1,063	1	80	465	546	...	546	1,609
1	21	...	...	22	2	24	1,068	1	87	469	557	5	562	1,630
...	-11	...	...	-11	-1	-12	-5	..	-7	-4	-11	-5	-16	-21
SITE.															
16	214	...	430	660	88	748	748	18	83	10	111	10	121	869	
12	185	...	383	580	234	814	814	14	78	10	102	11	113	927	
+4	+29	...	+47	+80	-146	-66	-66	+4	+5	...	+9	-1	+8	-58	

APPEN
STATISTICS OF MINES

Table
Number of workers and output of minerals during the

Province.	District and Mineral field.	Total Output.	Average number of persons employed						
			Underground.						
			Males.					Females.	Total Males and Females.
			Foremen and Mates.	Miners.	Other skilled labour.	Other unskilled labour.	Total Males.		
Punjab . . .	Gurgaon . . .	Tons. 1,713	..	..	..	..	..	..	SLA
	Kangra . . .	5,072	..	..	..	..	..	..	..
	Total . . .	6,785	..	..	..	..	..	..	..
	Grand Total (Slate) for 1935.	7,908	..	..	..	..	..	..	..
	Grand Total of preceding year.	7,390	..	..	..	..	..	..	..
	Difference . . .	+ 518	..	..	..	..	..	..	..
Bihar and Orissa.	Shahabad . . .	Tons. 283,102	..	..	..	..	..	..	LIME
	Amherst . . .	5,242	..	..	..	..	..	..	..
Burma . . .	Northern States. Shan	13,576	..	..	..	..	..	..	..
	Thetou . . .	9,335	..	..	..	..	..	..	..
	Total . . .	28,153	..	..	..	..	..	..	..
Central Provinces.	Bilaspur . . .	89,380	..	..	..	..	..	..	..
	Jubbulpore . . .	477,916	..	..	..	..	..	..	..
	Total . . .	517,296	..	..	..	..	..	..	..

DIX I—*contd.*AND MINERALS—*contd.*No. 1—*contd.*year 1935 at mines under the Indian Mines Act—*contd.*

daily in and about the mines.

Open workings.							Total Underground and Open workings.	Surface.						Grand Total.
Males.					Females.	Total Males and Females.		Males.				Females.	Total Males and Females.	
Foremen and Mates.	Miners.	Other skilled labour.	Other unskilled labour.	Total Males.				Clerical and supervis- ing staff.	Skilled labour.	Unskilled labour.	Total Males.			
TE—<i>contd.</i>														
12	49	47	34	142	...	142	142	1	...	1	2	...	2	144
48	96	74	120	338	...	338	338	...	...	...	...	...	...	338
60	145	121	154	480	...	480	480	1	...	1	2	...	2	482
83	174	157	218	632	13	645	645	1	...	1	2	...	2	647
83	176	165	178	602	37	639	639	1	...	2	3	...	3	642
...	-2	-8	+40	+30	-24	+6	+6	...	...	-1	-1	...	-1	+3
STONE.														
96	354	71	700	1,581	247	1,528	1,528	113	135	193	441	58	499	2,027
1	2	2	9	14	2	16	16	3	...	1	4	...	4	20
3	...	2	63	69	...	68	...	68	68	...	...	...	...	68
4	10	10	16	40	...	40	40	6	...	...	6	...	6	46
8	12	14	88	122	2	124	124	9	...	1	10	...	10	134
10	120	158	18	306	40	446	446	5	32	28	65	60	125	671
85	513	133	1,137	1,868	1,936	3,804	3,804	53	28	186	267	70	337	4,141
96	633	291	1,155	2,174	2,076	4,250	4,250	58	60	214	332	130	462	4,712

APPEN
STATISTICS OF MINES

Table
Number of workers and output of minerals during the

Province.	District and Mineral field.	Total Output.	Average number of persons employed					
			Underground,					
			Males.					Females.	Total Males and Females.
Foremen and Mates.	Miners.	Other skilled labour.	Other unskilled labour.	Total Males.				
Punjab	Attock	Tons. 124,341	LIME
	Mianwali	10,000	...	...	...	...	...
	Rawalpindi	37,416	...	...	...	...	...
	Total	171,757	...	...	...	...	...
	Grand Total (Limestone) for 1935	1,000,308	...	...	...	...	...
Grand Total of preceding year	940,860	...	...	...	...	...	...
Difference	+59,448	...	...	...	...	...	...
Bengal	Birbhum	Tons. 161,165	STONE (CHIEFLY IGNEOUS
	Gaya	24,260	...	...	...	...	...
Bihar and Orissa	Sonthal Parganas	508,639	...	...	...	...	...
	Shahabad	31,923	...	...	...	...	...
	Singhbhum	71,844	...	...	...	...	...
	Total	636,666	...	...	...	...	...
Bombay	Bombay	157,764	...	...	...	...	...
	Bombay Suburban	19,905	...	...	...	...	...
	Kaira	15,248	...	...	...	...	...
	Sukkur	14,645	...	...	...	...	...
	Surat	91,475	...	...	...	...	...
	Thana	26,912	...	...	...	...	...
Total	325,949	...	...	...	...	...	...

DIX I--contd.

AND MINERALS--contd.

No. 1--contd.

year 1935 at mines under the Indian Mines Act--contd.

daily in and about the mines.

Open workings.							Total Underground and Open workings.	Surface.						Grand Total.
Males.					Females.	Total Males and Females.		Males.				Females.	Total Males and Females.	
Foremen and Mates.	Miners.	Other skilled labour.	Other unskilled labour.	Total Males.				Clerical and supervising staff.	Skilled labour.	Unskilled labour.	Total Males.			
STONE--contd.														
5	164	...	...	169	..	169	169	3	3	97	103	...	103	272
4	...	...	160	104	35	139	139	...	...	...	...	...	...	129
6	16	...	..	23	..	22	22	5	4	80	89	...	79	111
15	180	...	100	295	25	320	320	6	7	177	192	...	192	512
214	1,179	376	2,003	3,872	2,350	6,222	6,222	188	202	585	975	188	1,163	7,385
174	998	230	2,222	3,624	2,130	5,754	5,754	149	210	822	1,181	247	1,428	7,182
+40	+181	+146	-119	+248	+320	+468	+468	+39	-8	-237	-206	-59	-265	+203
ROCK)														
1	312	81	120	514	8	522	522	33	195	211	439	94	533	1,055
16	...	...	251	267	118	415	415	...	...	...	...	...	...	415
66	773	239	187	1,205	225	1,490	1,490	98	242	934	1,274	554	1,828	3,318
...	6	...	106	112	66	168	168	..	...	...	...	...	...	168
19	185	85	236	525	420	945	945	7	9	141	157	65	222	1,167
101	964	324	780	2,169	849	3,018	3,018	105	251	1,075	1,431	619	2,050	5,968
3	108	56	126	293	...	293	293	21	..	1	22	11	33	326
...	...	...	32	32	...	32	32	2	15	39	56	...	56	88
2	4	4	...	10	...	10	10	5	4	70	79	...	79	89
4	70	50	...	124	...	124	124	1	4	50	55	60	115	239
9	25	68	192	294	198	492	492	5	...	...	5	...	5	497
5	...	...	119	124	82	206	206	5	...	...	5	...	5	211
23	207	178	469	877	280	1,157	1,157	39	23	160	222	71	293	1,450

APPEN
STATISTICS OF MINES

Table

Number of workers and output of minerals during the

Province.	District and Mineral field.	Total Output.	Average number of persons employed						
			Underground.						
			Males.					Females.	Total Males and Females.
			Foremen and Mates.	Miners.	Other skilled labour.	Other unskilled labour.	Total Males.		
			STONE (CHIEFLY IGNEOUS)						
Burma	Bassein	752	...	...	...	...	...	...
	Lower Chhindwin	12,507	...	...	...	...	...	...
	Mandalay	6,800	...	...	...	...	...	...
	Meiktila	3,000	...	...	...	...	...	...
	Mergui	2,257	...	...	...	...	...	...
	Tavoy	3,949	...	...	...	...	...	...
	Thaton	144,124	...	...	...	...	...	...
Toungoo	13,084	...	...	...	...	...	...
	Total	186,478	...	...	...	...	...	...
Central Provinces.	Akola	2,576	...	...	...	...	...	...
	Amraoti	1,957	...	...	...	...	...	...
	Nagpur	...	...	...	...	...	...	...
	Total	11,533	...	...	...	...	...	...
Madras	Chingleput	52,298	...	...	...	...	...	...
	East Godavari	8,021	...	...	...	...	...	...
	Guntur	52,296	...	...	...	...	...	...
	Trichinopoly	7,550	...	...	...	...	...	...
	Total	120,165	...	...	...	...	...	...
Punjab	Jhelum	53,904	...	...	...	...	...	...
	Sheikhupura	4,024	...	...	...	...	...	...
	Total	57,928	...	...	...	...	...	...

DIX I—*contd.*AND MINERALS—*contd.*No. 1—*contd.*year 1935 at mines under the Indian Mines Act—*contd.*

daily in and about the mines.

Open workings.							Total Underground and Open workings.	Surface.						Grand Total.
Males.					Females.	Total Males and Females.		Males.				Females.	Total Males and Females.	
Foremen and Mates.	Miners.	Other skilled labour.	Other unskilled labour.	Total Males.				Clerical and supervis- ing staff.	Skilled labour.	Unskilled labour.	Total Males.			
...	...	...	14	14	...	14	14	...	...	...	...	...	...	14
...	...	...	211	211	...	211	211	...	...	...	...	...	...	223
5	3	10	21	39	25	64	64	...	...	...	...	...	...	64
...	...	...	20	20	...	20	20	5	...	...	...	...	...	25
...	...	...	4	5	2	7	7	...	1	4	...	...	...	12
...	15	1	25	42	33	74	74	...	...	...	...	...	...	74
38	1,281	188	75	1,582	...	1,582	1,582	24	17	316	357	...	357	1,939
...	...	...	72	72	31	103	103	...	...	...	...	...	...	103
43	1,299	199	444	1,985	90	2,075	2,075	41	18	320	379	...	379	2,454
3	...	...	67	70	60	130	130	2	...	...	2	...	2	132
1	...	...	20	21	...	21	21	...	...	4	4	...	4	25
5	...	...	80	85	45	130	130	1	...	...	1	...	1	131
9	...	...	167	176	105	281	281	3	...	4	7	...	7	288
...	...	371	65	436	353	789	789	23	...	101	124	59	183	972
...	63	...	...	63	30	93	93	...	...	...	...	...	...	93
1	8	46	81	133	37	173	173	...	...	30	30	...	30	203
...	...	159	...	159	117	276	276	...	...	...	...	...	...	276
1	71	576	146	794	537	1,331	1,331	23	...	181	154	59	213	1,544
3	102	...	52	157	...	157	157	3	5	14	22	...	22	179
4	4	1	77	86	...	86	86	...	...	...	...	...	...	86
7	106	1	129	243	...	243	243	3	5	14	22	...	22	265

APPEN
STATISTICS OF MINES

Table

Number of workers and output of minerals during the

Province.	District and mineral field.	Total Output.	Average number of persons employed						Total Males and Females.
			Underground.						
			Males.					Females.	
			Foremen and Mates.	Miners.	Other skilled labour.	Other unskilled labour.	Total Males.		
			GRA						
Bihar and Orissa.	Singhbhum . . .	Tons 9,977	} Figures included						
Madras	Chingleput . . .	17,599							
	Grand Total (Gravel) for 1935.	27,576	...	...	...	...	...	...
	Grand Total of preceding year.	28,244	...	...	...	...	...	...
	Difference . . .	- 668	...	...	...	...	...	...
			MU						
Bombay	{ Bombay Suburban. Thana . . .	Tons 2,212 18,544	} Figures included						
	Grand Total (Murum) for 1935.	20,756							...
	Grand Total of preceding year.	6,454	...	...	...	...	...	...
	Difference . . .	+14,302	...	...	...	...	...	...
			FIRE						
Bengal	Burdwan . . .	Tons 370	...	...	...	...	...	...
Bihar and Orissa.	Maubhum . . .	2,060	...	...	...	...	...	...

DIX I—contd.

AND MINERALS—contd.

No. 1—contd.

year 1935 at mines under the Indian Mines Act—contd.

daily in and about the mines.

Open workings.				Total Males and Females.	Females.	Total Males and Females.	Total Underground and Open workings.	Surface.					Total Males and Females.	Grand Total.
Males.								Males.						
Foremen and Mates.	Miners.	Other skilled labour.	Other unskilled labour.					Total Males.	Females.	Clerical and supervising staff.	Skilled labour.	Unskilled labour.			Total Males.	Females.
VEL.														
in those for Stone.														
..
..
..
RUM.														
in those for Stone.														
..
..
..
CLAY														
..	10	..	9	19	1	20	20	..	..	..	..	..	..	20
2	30	..	5	37	3	40	40	2	3	4	9	5	14	54

APPEN
STATISTICS OF MINES

Table
Number of workers and output of minerals during the

Province.	District and Mineral field.	Total Output.	Average number of persons employed						
			Underground.						
			Males.					Females.	Total Males and Females.
			Foremen and Mates.	Miners.	Other skilled labour.	Other unskilled labour.	Total Males.		
		Tons.						FIRE	
Central Provinces.	Jubbulpore . .	24,806	...	...	...	...	...	...
	Grand Total (Fire Clay) for 1935.	27,236	..	...	...	...	...	...
	Grand Total of preceding year.	52,628	1	...	...	5	6	6
	Difference .	- 25,392	-1	...	...	-5	-6	-6
		Tons.						CHINA	
Bihar and Orissa.	Bhagalpur . .	360	...	9	...	42	51	51	
	Manbhum . .	40	...	...	...	...	...	...
	Singhbhum . .	6,872	..	...	...	...	...	...
	Total . .	7,272	...	9	...	42	51	51	
Burma . .	Thaton	133	...	...	...	...	...	...
Delhi . .	Delhi	2 929	2	30	...	...	32	32
Madras . .	Nellore	4	...	...	...	...	..	...
Rajputana . .	Ajmer-Merwara . .	69	...	.	...	...	..	...
	Grand Total (China Clay) for 1935.	10,407	2	39	...	42	83	83	
	Grand Total of preceding year.	16,014	4	39	...	...	43	43
	Difference .	-5,607	-2	...	...	+42	+40	+40

DIX I—*contd.*AND MINERALS—*contd.*No. 1—*contd.*year 1935 at mines under the Indian Mines Act—*contd.*

daily in and about the mines.

Open workings.							Total Males and Females.	Total Underground and Open workings.	Surface.						Grand Total.
Males.				Females.	Total Males and Females.	Males.				Females.	Total Males and Females.				
Foremen and Mates.	Miners.	Other skilled labour.	Other unskilled labour.			Total Males.			Clerical and supervising staff.			Skilled labour.	Unskilled labour.	Total Males.	
CLAY—<i>contd.</i>															
4	62	...	132	198	161	359	359	...	2	79	81	2	83	442	
6	104	...	146	254	165	419	419	2	5	83	90	7	97	516	
9	370	72	161	612	188	800	806	8	18	111	137	46	185	991	
-3	-266	-72	-15	-358	-23	-381	-387	-6	-13	-28	-47	-41	-88	-475	
CLAY															
4	...	...	27	31	44	75	126	...	...	...	...	...	...	126
1	...	...	4	5	3	8	8	1	5	12	18	12	30	38
17	88	2	166	207	315	522	522	22	36	130	197	222	119	941	
22	23	2	136	243	362	605	656	23	41	151	215	234	449	1,105	
...	...	1	8	9	...	9	9	3	1	...	4	...	4	13	
..	25	...	...	23	...	23	57	2	1	12	15	...	15	72
1	10	5	10	26	10	36	36	...	...	...	...	...	...	36
1	...	...	3	4	...	4	4	...	...	...	...	...	...	4
24	118	8	157	307	372	679	762	28	43	163	234	234	468	1,230	
22	113	11	169	315	467	782	825	24	36	162	222	156	378	1,203	
+2	+5	-3	-12	-8	-95	-103	-63	+4	+7	+1	+12	+78	+90	+27	

APPEN
STATISTICS OF MINES

Table

Number of workers and output of minerals during the

Province.	District and mineral field.	Total Output.	Average number of persons employed							
			Underground.							
			Males.					Females.	Total Males and Females.	
			Foremen and Mates.	Miners.	Other skilled labour.	Other unskilled labour.	Total Males.			
Bengal . . .	Burdwan . . .	Tons 5,958	..	..	..	..	..	..	..	CL
Punjab . . .	Attock . . .	28,100	Figures included in those							
	Grand Total (Clay) for 1935.	34,078	..	..	..	..	..	..	..
	Grand Total of preceding year.	47,556	..	..	..	..	..	..	..
	Difference	-13,478	..	..	..	..	..	..	..
Madras . . .	Cuddapah	Tons ..	..	..	..	..	..	..	..	BARY
	Kurnool . . .	270	1	3	..	..	4	..	4	
	Grand Total (Barytes) for 1935.	270	1	3	..	..	4	..	4	
	Grand Total of preceding year.	2,656	2	9	..	3	14	..	14	
	Difference	-2,386	-1	-6	..	-3	-10	..	-10	

DIX I—*contd.*AND MINERALS—*contd.*No. 1—*contd.*year 1935 at mines under the Indian Mines Act—*contd.*

daily in and about the mines.

AY.	Open workings.						Total Underground and Open workings.	Surface.						Grand Total.
	Males.					Females.		Males.					Total Males and Females.	
	Foremen and Mates.	Miners.	Other skilled labour.	Other unskilled labour.	Total Males.			Clerical and supervising staff.	Skilled labour.	Unskilled labour.	Total Males.	Females.		
...	...	18	...	18	22	40	40	...	7	...	7	...	7	47
for Limestone.														
...	...	18	...	18	22	40	40	...	7	...	7	...	7	47
3	36	2	57	98	38	136	136	1	7	...	8	...	8	144
-3	-36	+16	-57	-80	-16	-96	-96	-1	...	...	-1	...	-1	-97
TES.														
...	1	...	...	1	...	1	1	1	...	5	6	13	19	20
...	...	...	...	...	...	...	4	...	...	3	3	11	14	18
...	1	...	...	1	...	1	5	1	...	8	9	24	33	38
2	146	11	21	160	94	274	288	11	12	93	116	96	214	502
-2	-145	-11	-21	-179	-94	-273	-283	-10	-12	-85	-107	-74	-181	-464

DIX I—contd.

AND MINERALS—contd.

No. 1—contd.

year 1935 at mines under the Indian Mines Act—contd.

daily in and about the mines.

TITE.	Open workings.					Total Males and Females.	Total Underground and Open workings.	Surface.					Grand Total.		
	Males.							Females.	Males.					Total Males and Females.	
	Foremen and Mates.	Miners.	Other skilled labour.	Other unskilled labour.	Total Males.				Clerical and super- and super- vising staff.	Skilled labour.	Unskilled labour.	Total Males.			Females.
...	64	64	64		
...	5	5	...	5	5	...	...	14	14	...	14	19	
...	-5	-5	...	-5	-5	...	...	-14	-14	+64	+50	+45	
RE.	6	...	3	...	3	3	6	11	
chalk.	5	...	3	...	3	3	6	11	
...	6	2	...	...	2	3	5	13	
...	13	2	3	...	5	6	11	24	
1	...	10	14	25	9	34	50	1	...	4	5	5	10	60	
-1	...	-10	-14	-25	-9	-34	-37	+1	+3	-4	...	+1	+1	-36	
LK	...	13	...	13	11	24	24	1	...	...	1	...	1	25
...	
...	+13	...	...	+13	+11	+24	+24	+1	...	...	+1	...	+1	+25
EARTH.	
Limestone.	
...	
...	

DIX I—contd.

AND MINERALS—contd.

No. 1—contd.

year 1935 at mines under the Indian Mines Act—contd.

daily in and about the mines.

Open workings.							Total Underground and Open workings.	Surface.					Grand Total.	
Males.					Females.	Total Males and Females.		Males.			Females.	Total Males and Females.		
Foremen and Mates.	Miners.	Other skilled labour.	Other unskilled labour.	Total Males.				Clerical and supervising staff.	Skilled labour.	Unskilled labour.				Total Males.
SUM.														
2	...	...	8	10	34	44	44	...	...	5	5	65	70	114
those for Salt.														
2	...	...	8	10	34	44	44	...	...	5	5	65	70	114
...	...	...	20	20	...	20	20	...	...	...	...	...	...	20
+2	...	...	-12	-10	+34	+24	+24	...	...	+5	+5	+65	+70	+94
YL.														
1	28	...	33	62	...	62	62	1	...	...	1	...	1	63
3	...	37	23	63	...	63	63	1	...	...	1	...	1	64
-2	+28	-37	+10	-1	...	-1	-1	...	...	...	...	...	...	-1
TOS														
1	...	...	...	1	15	16	53	...	5	...	5	...	5	58
6	54	17	4	81	17	98	112	5	1	17	23	20	43	155
-5	-54	-17	-4	-80	-2	-82	-59	-5	+4	-17	-18	-20	-38	-97
PHITE														
...	3	2	1	6	5	11	11	...	...	...	...	...	...	11
...	...	...	3	3	1	4	4	...	...	...	...	...	...	4
...	8	2	4	9	6	15	15	...	...	...	...	...	...	15
...	...	...	4	4	...	4	4	...	...	...	...	...	...	4
...	+3	+2	...	+5	+6	+11	+11	...	...	...	...	...	...	+11

APPEN
STATISTICS OF MINES

Table

Number of workers and output of minerals during the

Province.	District and mineral field.	Total Output.	Average number of persons employed						
			Underground.					Females.	Total Males and Females.
			Males.						
			Foremen and Mates.	Miners.	Other skilled labour.	Other unskilled labour.	Total Males.		
Rajputana	Ajmer-Marwara	Tons.							FELS
	Total of preceding year.	600	...	...	...	...	...	...	...
	Difference	533	1	4	...	8	13	...	13
		+67	-1	-4	...	-5	-13	...	-13
Burma	Tavoy	Cwts.							BIS
	Total of preceding year.	2	...	...	...	...	...	...	...
	Difference	+2	...	...	...	...	...	...	...
Burma	Katha	Carats							GE
	{ Rubies . . .	98,753	}	}	}	}	}	}	}
	{ Rubin . . .	6,687							
	{ Sapphires . . .	2,474							
	Total of preceding year.	21,622	...	...	...	...	...	...	...
	Difference	153	...	...	...	...	...	...	...
	{ Rubies . . .	+77,131	}	}	}	}	}	}	}
	{ Rubin . . .	+6,687							
	{ Sapphires . . .	+2,321							
Madras	Salem	Cwts.							COBUN
	Total of preceding year.	556	...	...	...	...	...	...	...
	Difference	+556	...	...	...	...	...	...	...
	Grand Total (Metaliferous Mines) for 1935.	...	900	13,506	1,632	7,874	23,912	75	23,987
	Grand Total of preceding year.	...	753	10,445	1,993	5,843	19,034	135	19,169
	Difference	...	+147	+3,061	-361	+2,031	+4,878	-60	+4,818
	Grand Total (All Minerals) for 1935.	...	...	...	...	...	119,830	9,551	129,381
	Grand Total of preceding year.	...	...	...	...	...	109,023	11,193	120,216
	Difference	...	...	...	...	...	+10,807	-1,642	+9,165

DIX I—*concl'd.*AND MINERALS—*concl'd.*No. 1—*concl'd.*year 1935 at mines under the Indian Mines Act—*concl'd.*

daily in and about the mines.

	Open workings.						Total Underground and Open workings.	Surface.						Grand Total.	
	Males.					Females.		Total Males and Females.	Males.				Females.		Total Males and Females.
	Foremen and Matos.	Miners.	Other skilled labour.	Other unskilled labour.	Total Males.				Clerical and supervising staff.	Skilled labour.	Unskilled labour.	Total Males.			
P&E.	7	...	13	24	...	24	24	1	...	...	1	...	1	25
	6	5	...	13	2	15	28	...	...	...	...	...	...	28
	+2	+1	-5	+13	-2	+9	-4	+1	...	...	+1	...	+1	-3
MUTH. in those for Tin.	...	...	...	...	...	...	...	...	...	...	...	...	...	...
MS.	3	91	...	94	...	94	94	2	...	...	2	...	2	96
	2	49	...	53	...	53	53	...	...	...	...	...	...	53
	+1	+42	...	+41	...	+41	+41	+2	...	...	+2	...	+2	+43
DUM.	...	...	...	12	36	48	48	...	...	...	...	...	...	46
	
	...	...	...	+12	+26	+48	+48	...	...	...	...	...	...	+45
	1,281	21,215	5,113	11,662	39,271	12,560	51,851	75,838	1,757	4,885	7,549	14,191	4,687	18,878	94,716
	1,035	15,402	4,916	11,186	32,539	10,677	43,216	62,385	1,513	3,123	7,108	11,744	3,977	15,621	78,006
	+216	+5,813	+197	+476	+6,732	+1,903	+8,635	+13,453	+244	+1,762	+441	+2,447	+810	+3,257	+16,710
	...	...	...	45,689	14,193	50,882	189,263	...	...	...	48,548	16,159	64,707	253,970
	...	...	...	38,431	12,173	50,604	170,820	...	...	...	44,716	13,805	58,561	229,381
	...	...	...	+7,258	+2,020	+9,278	+18,443	...	...	...	+3,702	+2,354	+6,146	+24,569

Table

Statement of total mining population in Coal Mines in British India

Name of Province.	Name of Coalfield or District.	Total number attending work.								
		Males.				Females.				Total Males and Females.
		Under-ground.	O. W.	Surface.	Total.	Under-ground.	O. W.	Surface.	Total.	
		Tons.								
Assam	Khasi and Jaintia Hills	82	...	29	111	...	...	40	40	151
	Makum . . .	1,502	...	362	1,864	...	...	95	95	1,959
	Nazira . . .	190	...	158	348	...	...	...	...	348
	Total . . .	1,774	...	549	2,323	...	...	135	135	2,458
Baluchistan	Sor Range . .	11	...	...	11	...	...	...	...	11
	Khost . . .	39	3	1	43	...	...	...	...	43
	Total . . .	50	3	1	54	...	...	...	...	54
Bengal . . .	Raniganj . .	45,703	76	10,650	56,429	4,670	55	4,361	9,086	65,515
Bihar and Orissa.	Raniganj . .	5,044	127	1,127	6,298	510	69	651	1,230	7,528
	Jharia . . .	54,775	1,130	16,952	72,857	4,921	545	7,088	12,554	85,411
	Bokaro . . .	3,468	4,557	1,859	9,884	199	969	391	1,559	11,443
	Giridih . . .	6,163	94	944	7,201	328	66	293	692	7,893
	Kanarpura . .	1,116	1,131	574	2,821	127	455	125	707	3,528
	Hingir-Rampur	188	...	54	212	...	...	52	52	264
	Jainty . . .	470	17	149	636	29	...	18	47	683
Total . . .	71,194	7,056	21,659	99,909	6,114	2,104	8,623	16,841	116,750	
Central Provinces.	Betul . . .	44	...	163	207	...	...	91	91	298
	Wardha Valley	2,374	81	575	3,030	187	...	156	343	3,373
	Pench Valley .	7,760	120	2,979	10,259	852	63	827	1,742	12,001
	Total . . .	10,178	201	3,117	13,496	1,039	63	1,074	2,176	15,672
Punjab	Salt Range . .	1,858	139	915	2,912	...	...	20	20	2,932
Grand Total . .		130,757	7,475	36,891	175,123	11,823	2,222	14,213	26,258	203,381

DIX I—contd.

No. 1-A.

on a day in the selected week in February 1936.

Total number prevented from attending.									
Males.				Females.				Total Males and Females.	Grand Total.
Under-ground.	O. W.	Surface.	Total.	Under-ground.	O. W.	Surface.	Total.		
18	..	8	21	..	..	12	12	33	184
703	..	64	767	..	..	44	44	811	2,770
53	..	39	92	..	..	..	..	92	440
769	..	111	880	..	..	56	56	936	3,394
..	..	..	..	..	..	..	..	..	11
..	..	..	..	..	..	..	..	..	43
..	..	..	..	..	..	..	..	..	54
4,092	9	841	4,942	915	7	619	1,571	6,518	72,026
204	6	36	246	30	4	51	85	331	7,859
1,138	42	384	1,564	170	12	162	344	1,908	87,319
202	490	205	897	139	120	81	340	1,297	12,680
1,920	20	227	2,167	86	15	92	193	2,360	10,253
397	196	30	623	17	82	4	103	796	4,254
..	..	..	..	..	..	..	..	..	264
3	..	2	5	..	..	..	..	5	686
3,864	754	884	5,502	442	233	390	1,065	6,567	123,317
..	..	..	..	..	..	..	..	..	296
230	11	34	275	35	..	3	38	313	3,686
795	6	79	880	117	4	31	152	1,032	13,033
1,025	17	113	1,155	152	4	34	190	1,345	17,017
110	..	43	153	..	..	..	..	153	3,085
9,860	780	1,992	12,632	1,539	244	1,099	2,882	16,514	218,895

DIX I—contd.

No. 2.

each important mining field during the year 1935.

Open workings.						Surface.			
Overmen and Sirdars. Foremen and Mates.	Miners.	Loaders.	Skilled Labour.	Unskilled Labour.	Females.	Clerical and Supervising Staff.	Skilled Labour.	Unskilled Labour.	Females.
46	44	45	47	46	44	53	51	51	50
44	44	39	48	45	41	52	51	50	49
48	30	48	48	48	38	50	40	36	47
...	...	...	...	...	...	50	51	50	50
42	...	42	...	...	...	46	41	46	54
...	...	36	...	...	...	...	48	...	...
48	48	48	48	48	42	54	52	52	51
41	41	...	43	43	43	47	47	48	50
47	46	...	47	45	46	47	47	48	47
48	47	...	49	45	46	49	46	45	46
50	49	...	49	49	48	50	50	49	47
48	48	...	48	48	48	48	48	48	48
47	...	...	...	47	...	54	54	54	...
50	47	...	51	47	44	48	49	49	48
54	54	...	...	...	27	54	47	47	27
48	42	...	48	46	46	49	48	48	48
43	43	...	42	44	...	48	...	48	...

Table

Analysis of figures relating to

Province.	Coalfield.	Coal.					
		Opening stock.	Raisings.	Total.	Despatches.	Colliery consumption.	Coal delivered for cooking.
		Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Assam . . .	{ Khasi & Jaintia Hills.	...	1,077	1,077	711	...	...
	{ Makum . . .	...	196,677	196,677	182,507	11,011	2,859
	{ Nazira . . .	1,185	21,076	22,261	22,966	1,181	...
Baluchistan .	Baluchistan . . .	506	4,946	5,452	4,681	612	...
Bengal (and part of Bihar and Orissa).	Raniganj . . .	209,816	7,348,323	7,558,139	6,691,892	414,829	53,785
Bihar and Orissa.	{ Jharia . . .	520,910	9,245,292	9,766,202	7,529,072	487,247	1,265,276
	{ Bokaro . . .	4,909	1,331,272	1,336,181	1,270,141	35,804	26,427
	{ Karanpura . . .	6,065	424,536	430,601	412,811	10,488	...
	{ Giridih . . .	165,459	708,789	874,248	644,726	24,934	...
	{ Jainty . . .	5,355	34,037	39,392	27,762	7,598	...
	{ Hingir-Rampur . . .	1,835	27,331	29,166	22,388	3,900	...
Central Provinces.	{ Pench Valley . . .	15,585	1,214,099	1,229,684	1,141,454	66,493	56
	{ Wardha Valley . . .	10,873	312,591	323,464	293,131	22,338	...
Punjab . . .	Salt Range . . .	3,220	144,423	147,643	141,216	3,467	...
	Total 1935 . . .	945,718	21,014,469	21,960,187	18,384,728	1,089,902	1,370,403

DIX I—*contd.*

No. 3.

the output of Coal and Coke, 1935.

		Coke.									
Coal des- patched to coke fac- tories.	Closing stocks.	Opening stocks.		Coke made.		Despatches.		Colliery con- sumption.		Closing stocks.	
		Hard.	Soft.	Hard.	Soft.	Hard.	Soft.	Hard.	Soft.	Hard.	Soft.
Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
...	366	...	...	...	...	...	...	...	...	...	...
...	...	...	...	589	...	559	...	30	...	...	...
...	114	...	...	...	...	...	...	...	...	...	...
...	159	...	...	...	...	...	...	...	...	...	...
...	897,633	117	478	3,917	35,749	3,962	35,598	...	290	72	314
1,648,490	464,607	11,222	9,022	73,035	845,458	79,639	843,696	465	1,500	4,153	9,279
6,757	1,809	115	307	7,180	9,345	6,979	9,204	21	11	295	427
...	7,302	...	...	...	...	...	...	...	...	...	...
28,534	204,588	...	...	...	...	...	...	...	...	...	...
...	4,012	...	...	...	...	...	...	...	...	...	...
...	1,928	...	...	...	...	...	...	...	...	...	...
...	21,681	...	...	16	...	...	...	...	...	16	...
...	7,995	...	...	..	...	...	...	...	...	...	...
...	2,960	...	...	...	...	...	...	...	...	...	...
1,653,781	1,115,154	11,454	9,807	84,737	890,547	91,139	888,493	516	1,801	4,536	10,060

APPENDIX I—contd.

Table No. 4.

Numbers of mines opened, closed and inspected, during the year 1935.

PROVINCE.	District and mineral field.	Number of mines under the scope of the Act.	NUMBER OF MINES.				INSPECTIONS.	
			Worked under mechanical power.	Not worked by mechanical power.	Opened during the year.	Closed during the year.	Number of mines inspected.	Number of inspections.
COAL.								
Assam .	Khasi and Jaintia Hills	2	...	2	2	...	1	1
	Lakhimpur—Makum Coalfield	4	4	...	...	...	3	17
	Naga Hills—Nazira Coalfield	1	...	1	...	...	1	2
Baluchistan .	Baluchistan Coalfields	10	...	10	1	6	...	...
Bengal (and part of Bihar and Orissa).	Raniganj Coalfield	191	149	42	17	13	208	826
Bihar and Orissa.	Jharia Coalfield	206	164	42	7	13	226	1,532
	Bokaro Coalfield	5	5	...	...	...	5	18
	Kanupura Coalfield	5	3	2	...	1	4	10
	Giriāih Coalfield	6	3	3	1	1	8	52
	Jainty Coalfield	6	1	5	...	1	7	7
	Hingir-Rampur Coalfield	1	1	...	...	...	1	1
Central Provinces.	Betul	2	...	2	2	...	...	...
	Pench Valley Coalfield	23	17	6	3	...	25	65
	Wardha Valley	6	6	...	...	...	6	14

APPENDIX I—*contd.*Table No. 4—*contd.*Numbers of mines opened, closed and inspected, during the year 1935—*contd.*

PROVINCE.	District and mineral field.	Number of mines under the scope of the Act.	NUMBER OF MINES.				INSPECTIONS.	
			Worked under mechanical power.	Not worked by mechanical power.	Opened during the year.	Closed during the year.	Number of mines inspected.	Number of inspections.
COAL—<i>contd.</i>								
Punjab . . .	Salt Range Coalfield . . .	26	...	26	8	6	18	19
	Grand Total (Coal) for 1935 . . .	494	353	141	41	41	513	2,564
	Grand Total of preceding year.	490	347	143	52	33	529	2,065
	Difference . . .	+4	-6	-2	-11	+8	-16	+499
IRON ORE.								
Bihar and Orissa	Singhbhum	4	1	3	2	...	5	8
Burma . . . . .	... . . . .	3	...	3	...	...	1	1
	Grand Total (Iron Ore) for 1935 . . .	7	1	6	2	...	6	9
	Grand Total of preceding year.	6	..	6	1	...	2	5
	Difference . . .	+1	+1	...	+1	...	+4	+4
MANGANESE ORE.								
Bihar and Orissa	Singhbhum	12	...	12	5	5	8	8
Bombay	Panch Mahals	1	1	...	...	...	2	2

APPENDIX I—*contd.*Table No. 4—*contd.*Numbers of mines opened, closed and inspected, during the year 1935—*contd.*

PROVINCE.	District and mineral field.	Number of mines under the scope of the Act.	NUMBER OF MINES.				INSPECTIONS.	
			Worked under mechanical power.	Not worked by mechanical power.	Opened during the year.	Closed during the year.	Number of mines inspected.	Number of inspections.
MANGANESE ORE—<i>contd.</i>								
Central Provinces.	...	29	3	26	17	3	9	12
Madras	...	6	1	5	1	...	4	4
	Grand Total (Manganese Ore) for 1935.	48	5	43	23	8	23	26
	Grand Total of preceding year.	26	2	24	13	...	11	11
	Difference	+22	+3	+19	+10	+8	+12	+15
LEAD ORE.								
Burma	Northern Shan States	1	1	...	...	...	1	11
	Total of preceding year	1	1	...	...	...	1	9
	Difference	...	...	...	...	...	...	+2
GOLD.								
Bihar and Orissa	...	2	...	2	2	...	1	1
	Total of preceding year	3	...	3	..	3	2	2
	Difference	-1	...	-1	+2	-3	-1	-1
TIN AND WOLFRAM ORE.								
Burma	...	333	15	318	84	27	44	58
	Total of preceding year	269	10	259	97	15	94	129
	Difference	+64	+5	+59	-13	+12	-50	-71

APPENDIX I—*contd.*Table No. 4—*contd.*Numbers of mines opened, closed and inspected, during the year 1935—*contd.*

PROVINCE.	District and mineral field.	Number of mines under the scope of the Act.	NUMBER OF MINES.				INSPECTIONS.	
			Worked under mechanical power.	Not worked by mechanical power.	Opened during the year.	Closed during the year.	Number of mines inspected.	Number of inspections.
CHROMITE ORE.								
Baluchistan	Zhob	37	...	37	32	...	...	...
Bihar and Orissa	Singhbhum	11	...	11	1	...	7	7
	Grand Total (Chromite Ore) for 1935.	48	...	48	33	...	7	7
	Grand Total of preceding year	16	...	16	3	...	9	9
	Difference	+32	...	+32	+30	...	-2	-2
COPPER ORE.								
Bihar and Orissa	Singhbhum	2	2	...	...	...	1	5
	Total of preceding year	2	2	...	...	...	2	8
	Difference . . . . .	...	...	..	...	...	-1	-3
GEMS.								
Burma	Katha	6	4	2	3	...	4	4
	Total of preceding year	3	3	...	2	...	2	2
	Difference	+3	+1	+2	+1	...	+2	+2

APPENDIX I—*contd.*Table No. 4—*contd.*Numbers of mines opened, closed and inspected, during the year 1935—*contd.*

PROVINCE.	District and mineral field.	Number of mines under the scope of the Act.	NUMBER OF MINES.				INSPECTIONS.	
			Worked under mechanical power.	Not worked by mechanical power.	Opened during the year.	Closed during the year.	Number of mines inspected.	Number of inspections.
Madras	Salem	3	..	3	..	..	2	2
	Total of preceding year	3	..	3	..	..	2	2
	Difference	..	..	..	..	..	..	..
MAGNESITE.								
Bihar and Orissa.	.. . . . .	5	..	5	2	1	3	3
Central Provinces.	Jubbulpore	5	..	5	1	2	1	1
Madras . . . . .	.. . . . .	4	..	4	2	3	2	2
United Provinces.	Hamirpur	14	..	14	11	10	16	16
	Grand Total (Steatite) for 1935	28	..	28	16	16	22	23
	Grand Total of preceding year	25	..	25	5	12	4	4
	Difference	+3	..	+3	+11	+4	+18	+18

APPENDIX I—*contd.*Table No. 4—*contd.*Numbers of mines opened, closed and inspected, during the year 1935—*contd.*

PROVINCE.	District and mineral field.	Number of mines under the scope of the Act.	NUMBER OF MINES.				INSPECTIONS.	
			Worked under mechanical power.	Not worked by mechanical power.	Opened during the year.	Closed during the year.	Number of mines inspected.	Number of inspections.
SLATE.								
Bihar and Orissa.	Monghyr	7	...	7	1	6	7	10
Punjab . . . . .	... . . . .	15	...	15	6	2	14	14
	Grand Total (Slate) for 1935	22	...	22	7	8	21	24
	Grand Total of preceding year	23	...	23	3	6	17	17
	Difference	-1	...	-1	+4	+2	+4	+7
LIMESTONE.								
Bihar and Orissa.	Shahabad	16	...	16	8	6	8	8
Burma . . . . .	... . . . .	5	...	5	...	...	2	2
Central Provinces.	... . . . .	22	2	20	9	6	18	21
Madras . . . . .	... . . . .	...	...	...	...	...	2	2
Punjab . . . . .	... . . . .	3	1	2	1	...	1	1
	Grand Total (Limestone) for 1935	46	3	43	18	12	31	34
	Grand Total of preceding year	40	3	37	13	6	28	32
	Difference	+6	...	+6	+5	+6	+3	+2

APPENDIX I—*contd.*Table No. 4—*contd.*Numbers of mines opened, closed and inspected, during the year 1935—*contd.*

PROVINCE.	District and Mineral field.	Number of mines under the scope of the Act.	NUMBER OF MINES.				INSPECTIONS.	
			Worked under mechanical power.	Not worked by mechanical power.	Opened during the year.	Closed during the year.	Number of mines inspected.	Number of inspections.
STONE.								
Bengal . . .	Birbhum	4	...	4	...	...	...	...
Bihar and Orissa.	... . . . .	67	...	67	3	8	104	113
Bombay . . .	... . . . .	18	2	16	4	...	20	20
Burma . . .	... . . . .	14	...	14	2	1	5	5
Central Provinces.	... . . . .	3	...	3	...	...	...	...
Delhi . . .	Delhi . . . . .	...	...	...	...	...	1	1
Madras . . .	... . . . .	11	1	10	3	2	16	17
Punjab . . .	... . . . .	3	...	3	1	1	7	7
United Provinces.	Jhansi	1	...	1	...	...	24	24
Grand Total (Stone) for 1935 . . .		121	3	118	13	12	177	157
Grand Total of preceding year . . .		195	1	194	63	19	102	111
Difference . . .		-74	-2	-76	-50	-7	+75	+76

APPENDIX I—*contd.*Table No. 4—*contd.*Numbers of mines opened, closed and inspected, during the year 1935—*contd.*

PROVINCE.	District and Mineral field.	Number of mines under the scope of the Act.	NUMBER OF MINES.				INSPECTIONS.	
			Worked under mechanical power.	Not worked by mechanical power.	Opened during the year.	Closed during the year.	Number of mines inspected.	Number of inspections.
SANDSTONE.								
Bihar and Orissa.	Shahabad	2	...	2	...	...	3	3
Burma . . .	Tonngoo	1	...	1	...	...	...	...
United Provinces.	... . . . .	...	..	..	..	..	7	7
	Grand Total (Sandstone) for 1935.	3	...	3	..	..	10	10
	Grand Total of preceding year.	10	...	10	1	2	9	10
	Difference	-7	...	-7	-1	-2	+1	...
FIRE CLAY.								
Bengal . . .	Burdwan	2	...	2	1	2	5	5
Bihar and Orissa.	Manbhum	1	...	1	...	...	13	15
Central Provinces.	Jubbulpore	3	2	1	...	...	2	2
	Grand Total (Fire Clay) for 1935	6	2	4	1	2	20	22
	Grand Total of preceding year.	12	1	11	1	1	5	6
	Difference	-6	+1	-7	...	+1	+15	+16

APPENDIX I—contd.

Table No. 4—contd.

Numbers of mines opened, closed and inspected, during the year 1935—contd.

PROVINCE.	District and Mineral field.	Number of mines under the scope of the Act.	NUMBER OF MINES.				INSPECTIONS.	
			Worked under mechanical power.	Not worked by mechanical power.	Opened during the year.	Closed during the year.	Number of mines inspected.	Number of inspections.
Bihar and Orissa.	...	7	...	7	1	...	6	6
Burma	Thaton	1	..	1	...	...	...	...
Delhi	Delhi	5	...	5	3	4	7	7
Madras	Nellore	1	...	1	...	1	1	1
Rajputana	Ajmer-Merwara	1	...	1	...	1	...	...
	Grand Total (China Clay) for 1935.	15	...	15	4	6	14	14
	Grand Total of preceding year	14	...	14	7	4	13	13
	Difference	+1	...	+1	-3	+2	+1	+1
					CLAY.			
Beagal	Burdwan	1	1	...	1	...	1	2
	Total of preceding year	5	1	4	...	1	2	3
	Difference	-4	...	-4	+1	-1	-1	-1

APPENDIX I—*contd.*Table No. 4—*contd.*Numbers of mines opened, closed and inspected, during the year 1935—*contd.*

PROVINCE.	District and Mineral field.	Number of mines under the scope of the Act.	NUMBER OF MINES.				INSPECTIONS.	
			Worked under mechanical power.	Not worked by mechanical power.	Opened during the year.	Closed during the year.	Number of mines inspected.	Number of inspections.
OCHRE.								
Central Provinces.	Chanda	1	...	1	...	1	1	1
United Provinces.	Banda	1	...	1	...	...	1	1
	Grand Total (Ochre) for 1935	2	...	2	...	1	2	2
	Grand Total of preceding year.	4	...	4	2	...	1	1
	Difference	-2	...	-2	-2	+1	+1	+1
CHALK.								
Central Provinces.	Jubbulpore	1	...	1	1	...	...	...
	Total of preceding year	...	...	..	...	...	...	...
	Difference	+1	...	+1	+1	...	...	...
BARYTES.								
Madras	... . . . .	2	...	2	...	...	4	4
	Total of preceding year . .	9	...	9	2	1	1	1
	Difference	-7	...	-7	-2	-1	+3	+3

APPENDIX I—*contd.*Table No. 4—*contd.*Numbers of mines opened, closed and inspected, during the year 1935—*contd.*

PROVINCE.	District and Mineral field.	Number of mines under the scope of the Act,	NUMBER OF MINES.				INSPECTIONS.	
			Worked under mechanical power.	Not worked by mechanical power.	Opened during the year.	Closed during the year.	Number of mines inspected.	Number of inspections.
APATITE.								
Madras . . .	Trichinopoly	1	...	1	1	...	2	2
	Total of preceding year	1	...	1	1	...	...	...
	Difference	...	...	...	...	...	+2	+2
GYPSUM.								
Madras . . .	Trichinopoly	3	...	8	1	...	1	1
	Total of preceding year	1	...	1	1	...	..	...
	Difference	+2	...	+2	...	...	+1	+1
BERYL.								
Rajputana . . .	Ajmer-Marwara	2	...	2	1	...	2	2
	Total of preceding year	2	...	2	2	...	2	2
	Difference	...	...	...	+1	...	...	...
CORUNDUM.								
Madras . . .	Salem	1	...	1	1	...	...	...
	Total of preceding year . . . . .	...	...	...	...	...	...	...
	Difference	+1	...	+1	+1	...	...	...
ASBESTOS.								
Madras . . .	Cuddapah	1	...	1	1	1	...	...
	Total of preceding year	5	...	5	5	5	...	...
	Difference	-4	...	-4	-4	-4	...	...

APPENDIX I—*concl.*Table No. 4—*concl.*Numbers of mines opened, closed and inspected, during the year 1935—*concl.*

PROVINCE.	District and Mineral field.	Number of mines under the scope of the Act.	NUMBER OF MINES.				INSPECTIONS.	
			Worked under mechanical power.	Not worked by mechanical power.	Opened during the year.	Closed during the year.	Number of mines inspected.	Number of inspections.
Central Provinces. Madras	Betul	1	..	1	1	..	..	..
	Vizagapatam	1	..	1	1	..	..	..
	Grand Total (Graphite) for 1935	2	..	2	2	..	..	..
	Grand Total of preceding year .	1	..	1	1	1	..	..
	Difference	+1	..	+1	+1	-1	..	..
Bengal	SAND.							
	Burdwan . . . . .	..	..	..	..	..	2	2
	Total of preceding year	2	..	2	..	..	1	1
Difference	-2	..	-2	..	..	+1	+1	
Central Provinces.	BAUXITE.							
	Jubbulpore . . . . .	..	..	..	..	..	1	1
	Total of preceding year . . . . .	..	..	..	..	..	..	..
Difference . . . . .	..	..	..	..	..	+1	+1	
Rajputana	FELSPAR							
	Ajmer-Merwara	7	..	7	1	3	3	3
	Total of preceding year	4	..	4	..	2	2	2
	Difference	+3	..	+3	+1	+1	+1	+1
	Grand Total (Metaliferous Mines), for 1935.	1,319	72	1,247	513	233	659	751
Grand Total of preceding year .	1,185	53	1,132	490	243	457	539	
Difference	+134	+19	+115	+33	+40	+193	+212	
Grand Total (All Minerals) for 1935.	1,813	425	1,388	554	324	1,172	3,315	
Grand Total of preceding year .	1,675	400	1,275	532	276	986	2,601	
Difference	+138	+25	+113	+22	+48	+186	+714	

APPENDIX I—contd.

Table No. 5.

The following table shows the fluctuations in the output of the principal minerals raised from mines classed under the Indian Mines Act. The other minerals raised are slate, magnesite, steatite, clay, fuller's earth, ochre, barytes, apatite, stone, asbestos, gypsum, felspar, beryl and gems.

Year.	Coal.	Manga- nese ore.	Mica.	Lime- stone.	Salt.	Gold.	Copper ore.	Wolfram ore.	Iron ore.	Chro- nite ore.	Tin ore.	Lead ore.	Silver.
	Tons.	Tons.	Owts.	Tons.	Tons.	Troy ozs.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Troy ozs.
1926	20,093,024	857,099	41,451	627,232	122,801	1,053	9,508	751	600,363	16,455	2,568	362,004	5,103,705
1927	21,108,976	878,531	42,081	1,132,235	145,311	2,395	5,010	530	1,008,291	17,096	2,056	450,777	6,004,586
1928	31,515,796	716,626	44,629	1,404,678	145,543	7	18,055	623	1,306,754	17,107	2,777	443,654	7,404,728
1929	22,308,174	750,908	49,437	1,313,647	148,496	30	76,831	1,061	1,436,385	31,054	3,584	464,561	7,280,517
1930	22,683,861	623,678	52,516	1,148,312	147,276	30	123,749	1,509	1,132,893	30,488	3,001	530,119	7,054,206
1931	20,514,597	847,373	46,177	862,226	134,918	..	159,636	969	590,176	14,938	2,552	397,079	5,900,400
1932	18,719,587	83,119	32,643	725,378	150,286	50	175,375	848	673,434	7,666	2,057	372,586	5,908,956
1933	18,160,681	53,240	41,035	1,120,110	145,838	267	201,723	836	653,239	9,770	3,309	454,791	6,054,009
1934	20,243,977	221,362	55,555	940,860	154,055	858	338,676	1,333	834,477	9,356	3,690	443,489	5,782,033
1935	21,014,469	422,847	58,553	1,000,308	150,515	1,255	350,801	2,549	1,179,050	19,039	4,383	460,886	5,825,929

Table No. 6.

The following table shows the amount of coal raised, the average number of persons working daily and the death-rates during the years 1926 to 1935 in respect of coal mines under the Indian Mines Act :—

Year.	Amount of coal raised.	Average number of persons work- ing daily below and above ground.	Number of deaths below and above ground.	Death-rates.	
				Per 1,000,000 tons raised.	Per 1,000 per- sons working daily below and above ground.
1926	Tons. 20,093,024	170,628	171	8.51	1.00
1927	21,108,976	165,213	181	8.57	1.10
1928	21,515,796	164,139	218	10.13	1.33
1929	22,308,174	165,658	194	8.70	1.17
1930	22,683,861	169,001	211	6.30	1.25
1931	20,514,597	158,267	185	9.02	1.17
1932	18,719,587	148,489	151	8.07	1.02
1933	18,160,681	144,707	124	6.83	0.86
1934	20,243,977	151,375	157	7.76	1.04
1935	21,014,469	159,254	264	12.56	1.66

APPENDIX I—contd.

Table No. 7.

Aggregate horse power and purpose for use of electric motors installed both on surface and underground at coal mines under the Indian Mines Act.

Coalfield.	Horse power on surface.					Horse power below ground.					Total horse power of motors installed.	
	Winding.	Ventilation.	Haulage.	Coal washing or screening.	Miscellaneous.	Total.	Haulage.	Pumping.	Portable machinery.	Miscellaneous.		Total.
Assam . . . . .	...	117	125	7	179	428	180	...	...	...	180	608
Bokaro	723	300	175	137	1,099	2,434	390	981	...	75	1,446	3,880
Central Provinces . . . . .	...	85	50	...	54	219	173	694	206	4	1,017	1,236
Giridih	165	388	...	270	464	1,277	797	4,112	112	2	5,023	6,300
Jharia	3,228	980	1,712	1,100	1,377	8,397	7,955	21,393	2,254	2,387	33,089	42,388
Karanpura . . . . .	...	75	825	95	314	1,309	...	385	4	...	389	1,688
Punjab . . . . .	...	...	25	...	...	25	...	12	...	...	12	37
Raniganj	2,535	1,345	585	718	596	5,724	6,154	11,649	2,208	158	20,169	25,893
Total	6,651	3,200	3,477	2,322	4,073	19,813	15,559	39,226	4,784	2,626	62,225	82,038

Table No. 8.

Number of Mines under the Indian Mines Act, where electric power is used, and the aggregate horse power of electric motors installed.

Province.	Minerals worked.						Total horse power of motors installed.
	Coal.		Silver-Lead.		Sundry Minerals.		
	Number of mines.	Horse power.	Number of mines.	Horse power.	Number of mines.	Horse power.	
Assam	2	608	...	...	...	...	608
Bengal	43	23,665	...	...	1	58	23,663
Bihar and Orissa	66	56,552	...	...	5	3,810	59,862
Bombay . . . . .	...	...	...	...	1	123	123
Burma . . . . .	...	...	1	3,667	10	1,421	5,088
Central Provinces	8	1,236	...	...	6	545	1,781
Madras . . . . .	...	...	...	...	3	426	426
Punjab	1	37	...	...	2	1,984	2,021
Total	120	82,038	1	3,667	28	7,867	93,572

APPENDIX I—*contd.*

Table No. 9.

Number and type of coal-cutting machines at work in Coal Mines under the Indian Mines Act.

Name of machine.	British.	American.	Chain.	Bar.	Percussive.	Power.		Total number of machines.
						Electricity.		
						A. C.	D. C.	
Goodman . . . . .	...	45	45	...	...	27	18	45
Hardy	5	...	...	..	5	5	...	5
Mavor and Coulson	42	...	23	19	...	41	1	42
Sullivan . . . . .	...	3	3	...	...	3	...	3
Total	47	48	71	19	5	76	19	95
Jharia coalfield				23	machines	} Total number of square feet undercut—66,34,100.		
Raniganj coalfield				59	"			
Central Provinces coalfield				6	"			
Karainpura coalfield				2	"			

Table No. 10.

Number of mechanical ventilators in use at Coal Mines under the Indian Mines Act.

Assam.	Baluchistan.	Bengal.	Bihar and Orissa.	Central Provinces.	Punjab.	Total.
9	...	30	42	10	...	91

APPENDIX I—contd.

Table No. 11.

Number and type of safety lamps in use at Coal Mines under the Indian Mines Act.

Name of manufacturer.	Number in use in:—						Total.
	Assam.	Baluchistan.	Bengal.	Bihar and Orissa.	Central Provinces.	Punjab.	
			Electric.				
Ceag	302	...	...	154	...	..	456
Oldham . . . . .	...	...	...	10	...	...	10
			Flame type.				
Davies	434	...	3,991	1,513	...	...	5,938
Hailwood	946	...	40	2,879	...	...	3,865
Naylor . . . . .	...	...	906	993	...	3	1,902
Patterson . . . . .	...	...	253	1,133	...	...	1,386
Premier . . . . .	...	...	24	1,037	...	...	1,061
Thomas Williams . . . . .	...	...	8,041	4,207	...	...	12,248
Wolfe . . . . .	...	6	...	...	...	..	6
Total	1,682	6	13,255	11,926	...	3	26,872

9,167 were locked by lead rivets and 17,705 by magnetic means.

Table No. 12.

Statement of explosives used during the year 1935 at mines under the Indian Mines Act.

Name of explosives.	Quantity of explosives used, in lb., in:—								Total.
	Coal mines.	Mica mines.	Manganese mines.	Lead ore mines.	Tin and Wolfram mines.	Limestone mines.	Stone mines.	Other mines.	
Dynamite	26,826	101,949	14,810	...	19,827	3,919	9,422	44,371	221,124
Gelignite	32,762	35,559	29,138	128,276	32,855	3,743	12,452	403,252	678,037
Monobel	16,653	...	...	...	...	7,490	...	...	24,143
Stonobel	66,643	...	...	...	...	...	...	...	66,643
Dynobel	600	...	...	...	...	...	...	...	600
Ballistite . . . . .	...	...	...	...	...	...	6	..	6
Raunkol	7,349	...	...	...	...	...	...	...	7,349
Liquid Oxygen	64,030	...	...	...	...	...	...	...	64,030
Gunpowder	2,361,124	3,740	27,460	..	315	200,079	121,452	222,422	2,936,592
Picric Powder . . . . .	...	...	...	...	...	...	1,627	...	1,627
Number of detonators used.	511,286	1,052,878	300,665	204,548	221,993	21,140	108,198	883,920	3,304,628

APPENDIX I—*concl.*

Table No. 13.

LIST OF "PERMITTED" EXPLOSIVES.

Name of Explosive.	Place of Manufacture.	Permissible maximum charge.
Monobel, No. 1	Ardeer, Ayrshire, Great Britain and Modderfontein, South Africa .	} 28 ounces.
A. 2. Monobel	Ardeer, Ayrshire, Great Britain and Deerpark, Melbourne, Australia .	} 28 ounces.
Polar Dynobel, No. 2	Ardeer, Ayrshire, Great Britain .	28 ounces.
Samsonite, No. 3	Ardeer, Ayrshire, Great Britain and Deerpark, Melbourne, Australia .	} 28 ounces.
Stonobel	Ardeer, Ayrshire, Great Britain and Deerpark, Melbourne, Australia .	} 28 ounces.
Roburite, No. 4	Gathurst, Wigan, Great Britain .	28 ounces.
A. I. Rounkol	Ardeer, Ayrshire, Great Britain .	18 ounces.

APPENDIX II
ACCIDENTS IN MINES.

Table No. 1.

Fatal Accidents during the year 1935.

Serial number.	Date and hour of accident.	Name and situation of mine.	Name of owner.	Name, sex, age and occupation of person killed.	Name of mineral worked.	Cause of accident and remarks.
EXPLOSIONS AND IGNITIONS OF FIRE-DAMP AND COAL DUST—(83 deaths).						
1	25th May, 11 A. M.	Kurharbaree mine, Giridih P. O., Bihar and Orissa.	Government of India, Railway Department (E. I. Railway).	Jhadee Majhi, (m.), 40, Bodhan Meah, (m.), 30, <i>Coal-cutters.</i>	Coal	The deceased entered a slightly rising gallery, about 70' long with an open light and ignited a small accumulation of fire-damp. They sustained serious burns to which both of them succumbed. Inspection and inquiry made.
2	29th June, 8-45 P. M.	Bagdigi mine, Jharia P. O., Bihar and Orissa.	The Bank of Baroda Ltd. (Receivers in possession).	Hari Sadhan Chatterjee, (m.), 41, <i>Asstt. Manager.</i> Bidesi Kurmi, (m.), 30, Ram Ash Pandey, (m.), 18, Prabhat Turi, (m.), 42, <i>Labourers.</i> Sohna Totowa, (m.), 18, Keshi Dasadh, (m.), 25, <i>Trolleyman;</i> Jagdish Pandey, (m.), 22, <i>Munshi;</i> Tribeni Singh, (m.), 42,	Coal	Owing to an inrush of water from the surface into an area on fire in two seams above another seam which was being worked a reversal of the air-current occurred which filled the workings of the lower seam with inflammable gases. An explosion resulted which caused the death of five persons inside the mine. Twenty-one persons sitting outside the mine were seriously injured and fourteen of these afterwards died. Inspection and inquiry made.

3	24th July, 1 P. M.	Kurhulbaree mine, Giridih F. O., Bihar and Orissa.	Government of India, Railway Department (E, I. Railway).	<p>Chitoo Meah, (m.), 35, <i>Overmen</i> ; Nanbaboo, (m.), 30, Malharoo Chamar, (m.), 30, Jharoo Chamar, (m.), 31, Dukha'oo Bilaspuri, (m.), 38, Munool Bilaspuri, (m.), 45, <i>Coal-cutters</i> ; Bh too Dosadh, (m.), 25, <i>Hookman</i> ; Ganga Ram Singh, (m.), 28, Maniraddin, (m.), 45, <i>Pump-men</i> ; Phagoo Mondal, (m.), 19, Lalit Mondal, (m.), 18, <i>Main drivers.</i></p> <p>Jangli Desadh, (m.), 38, Rewar Chamar, (m.), 35, Bispat Chamar, (m.), 20, Jago Gope, (m.), 40, Dhanoo Chamar, (m.), 25, Choria Chamar, (m.), 35, Iswar Chamar, (m.), 20, Ghanoo Gope, (m.), 30, Batalal Chamar, (m.), 20, Ram Dhoni Chamar, (m.), 20, Dass Chamar, (m.), 30.</p>	Coal	Four shots of liquid oxygen explosive were fired in roof coal in a depillaring area. Three shots exploded but the fourth was a 'blown out' shot which ignited coal-dust and resulted in an explosion which extended over a distance of about 900 feet. Seventy-six persons were burned of whom sixty-two died. Inspection and inquiry made.
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APPENDIX II—*contd.*

Table No. 1—*contd.*

Fatal Accidents during the year 1935—*contd.*

Serial number.	Date and hour of accident.	Name and situation of mine.	Name of owner.	Name, sex, age and occupation of person killed.	Name of mineral worked.	Cause of accident and remarks.
3— <i>contd.</i>				Paroo Gopa, (m.), 48, Balu Bhuiya, (m.), 38, Dukhi Gopa, (m.), 48, Thandi Chamar, (m.), 30, Chhaku Chamar, (m.), 30, Bholi Koiri, (m.), 45, Bootoo Bhuiya, (m.), 48, Jai Bhuiya, (m.), 32, Bajo Chamar, (m.), 30, Bilto Dhobi, (m.), 32, Sukar Dosadh, (m.), 30, Jagu Bhuiya, (m.), 35, Sudhan Bhuiya, (m.), 32, Bideshi Dosadh, (m.), 35, Heran Chamar, (m.), 32, Tilak Chamar, (m.), 35, Dukhi Bhuiya, (m.), 35,		

EXPLOSIONS AND IGNITIONS OF FIRE-DAMP AND COAL DUST—(83 deaths)—*contd.*

Sanibar Chamar,
(m.), 32,
Degau Bhuiya,
(m.), 25,
Hero Dosadh s/o
Pritam Dosadh,
(m.), 40,
Lachman Dosadh,
(m.), 35,
Uttim Chamar
alias Etwari
Chamar,
(m.), 25,
Darshan Chamar,
(m.), 28,
Janki Bhuiya,
(m.), 40,
Mehadeo Chamar,
(m.), 18,
Daso Chamar,
(m.), 35,
Samli Bhuiya,
(m.), 28,
Prayag Bhuiya,
(m.), 18,
Udho Chamar,
(m.), 25,
Pikban Chamar,
(m.), 40,
Harilal Chamar,
(m.), 20,
Harin Chamar,
(m.), 25,
Somar Chamar,
(m.), 25,
Daulat Bhuiya,
(m.), 32,
Sito Bhuiya,
(m.), 18,
Bodhi Bhuiya,
(m.), 30,
Ismail Meah,
(m.), 20,
Lachman Chamar,
(m.), 26,
Tilak Koiri,
(m.), 25,
Manga Dosadh,
(m.), 30,

APPENDIX II—contd.

Fatal Accidents during the year 1935—contd.

Serial number.	Date and hour of accident.	Name and situation of mine.	Name of owner.	Name, sex, age and occupation of person killed.	Name of mineral worked.	Cause of accident and remarks.
EXPLOSIONS AND IGNITIONS OF FIRE-DAMP AND COAL DUST—(83 deaths.)—concl'd.						
3—	contd.	.....	.....	Alam Meah, (m.), 32, <i>Coal-cutters,</i> Bhatni Chamain, (f.), 38, Patni Do-adhin, (f.), 33, Saro Bhuiyan, <i>alias Parrotia,</i> (f.), 13, Jaswa Bhuiyan, (f.), 25, Barni Do-adhin, (f.), 40, Bunni Chamain, (f.), 20, Kari Bhuiyan, (f.), 18, Kachia Bhuiyan, (f.), 18, Burni Chamain, (f.), 25, <i>Coal-carriers,</i> Jitin Meah, (m.), 40, <i>Sinter.</i>	.....	.....

FALLS OF ROOF AND SIDES.

(a) Falls of roof—(75 deaths).

4	4th January, 12 noon.	Lodna mine, Jharia P. O., Bihar and Orissa.	Lodna Colliery Co. (1920) Ltd.	Chowra Roy, (m.), 24, <i>Coal-carrier.</i>	Coal	Deceased was loading coal in a gallery 23 feet high when about 3 cwt. of coal fell on him from the roof. He sustained injuries which proved fatal. Inspection and inquiry made.
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5	14th January, 7 P.M.	Barkui mine, Parasia P. O., Central Provinces.	Pench Valley Coal Co., Ltd.	Amarlal Mehra, (m.), 40, <i>Coal-cutter.</i>	Coal	When two miners returned to a place from which they had been withdrawn they were seriously injured by a mass of stone 15' x 6' x 1' 6" thick which fell from a height of 5 feet, one of them contracted pneumonia from which he died eight days later. Inspection and inquiry made.
6	14th January, 10 P.M.	Barkui mine, Parasia P. O., Central Provinces.	Pench Valley Coal Co., Ltd.	Khurkur Kalbar, (m.), 28, <i>Timberman.</i>	Coal	While passing under an insecure roof which he had been ordered to support, a timberman was struck by a piece of roof stone, about 4' x 2' x 9" thick, which fell on his left foot from a height of 6 feet. He succumbed to his injuries forty-six days later. Inspection and inquiry made.
7	23rd January, 4 A.M.	Sripur mine, Kaliabari P. O., Bengal.	Lodua Colliery Co., (1920), Ltd.	Karam Singh, (m.), 30, <i>Coal-cutter.</i>	Coal	While a miner was testing the roof of a gallery 8 feet high a piece of coal 1' 6" x 1' 6" x 9" fell from the roof and struck him on the face. He received severe injuries and died thirty-five hours later. Inspection and inquiry made.
8	29th January, 1-15 P.M.	Jamuria mine, Charanpur P. O., Bengal.	Equitable Coal Co., Ltd.	Fulchand Chamar, (m.), 33, <i>Coal-cutter.</i>	Coal	A miner was removing fallen coal from an unsupported goaf under the direction of a sirdar. After removing about 10 tons of coal a mass of stone 10' x 3' x 1' fell from the roof and killed him instantly. Inspection and inquiry made.
9	6th February, 1 A.M.	Datla mine, Junnordeo P. O., Central Provinces.	Amalgamated Coal- fields, Ltd.	Nanhe Singh Bakur, (m.), 40, <i>Coal-cutter.</i>	Coal	While sitting at the side of a gallery 6' x 6' a miner was injured by a piece of coal 8" x 8" x 2" thick which fell from a "sip" in the roof. The wound became septic and he died ten days later. Inspection and inquiry made.
10	8th February, 6 P.M.	Akhalpur mine, Charanpur P. O., Bengal.	Hurriladih Coal Co., Ltd.	Bijoy Gopal Dass, (m.), 32, <i>Overman.</i>	Coal	While an overman was supervising the withdrawal of props from a depillared area a piece of shale 2' 6" x 2' x 2' fell from the roof. The edge of the shale struck him on the head and caused severe injuries from which he afterwards died. Inspection and inquiry made.
11	23rd February, 6 P.M.	Toposi mine, Toposi P. O., Bengal.	Banera Coal Co., Ltd.	Dhancawar Mahato, (m.), 25, <i>Assistant to a Timberman.</i>	Coal	While a timberman and his two assistants were setting a prop in a gallery 8 feet high a piece of stone, about 3' x 2' 6" x 5" thick, became dislodged from the roof and struck one of the assistants on the back. He succumbed to his injuries six hours later. Inspection and inquiry made.
12	26th February, 2-30 A.M.	Upper Ghorawari mine, Junnordeo P. O., Central Provinces.	B. N. Budhoolal & Co.	Tulshi Koiri, (m.), 35, <i>Coal-cutter.</i>	Coal	While a miner was shovelling coal from a gallery, after blasting, a piece of coal, 5' x 5' x 6" thick, fell on his back from between two "sips" from a height of 6 feet. He succumbed to his injuries sixteen hours later. Inspection and inquiry made.
13	27th February, 3 A.M.	Kukurbarce mine, Girdih P. O., Bihar and Orissa.	Government of India, Railway Depart- ment, (E. I. Railway).	Khern Manjhi, (m.), 28, <i>Coal-cutter.</i>	Coal	While deceased was dressing roof stone from between two "sips" in the roof, a mass of stone 2' x 1' x 9" approximately, fell from a height of 6½ feet, inflicting fatal injuries. Inspection and inquiry made.

APPENDIX II—contd.

Fatal Accidents during the year 1935--contd.

Serial number.	Date and hour of accident.	Name and situation of mine.	Name of owner.	Name, sex, age and occupation of person killed.	Name of mineral worked.	Cause of accident and remarks.
FALLS OF ROOF AND SIDES—contd.						
(a) Falls of roof—contd.						
14	9th March, 5-30 P.M.	Upper Jinsgora mine, Juarin P. O., Bihar and Orissa.	New East India Press Co., Ltd.	Nando Roy, (m.), 25, Coal-cutter. Kristo Muni, (f.), 40, Loader.	Coal	While loading coal in a gallery where roof coal was being cut a mass of coal, 7' x 6' x 2' 6", fell from a "slip" in the roof at a height of 10 feet killing two miners on the spot. Inspection and inquiry made.
15	26th March, 3 A.M.	Katras-Choitodih mine, Katrasg rh P. O., Bihar and Orissa.	Burnakur Coal Co., Ltd.	Gabarali Meah, (m.), 26 Coal-cutter.	Coal	In a depilating area, a mass of stone, measuring about 6' x 3' x 2', rolled down and dislodged three props when a fall of roof occurred in the adjoining goaf. A miner, who was endeavouring to reach a place of safety was struck by one of the props and received injuries which proved fatal three hours later. Inspection and inquiry made.
16	26th March, 5 A.M.	Pootkee mine, Kusinda P. O., Bihar and Orissa.	Eastern Coal Co., Ltd.	Gajo Mahato, (m.), 20, Coal-cutter.	Coal	While loading coal in a goaf from where props had been withdrawn two days before a large stone fell on deceased and killed him on the spot. Inspection and inquiry made.
17	30th March, 6 P.M.	Gambrola (No. 8 North) mine, Dandot P. O., Punjab.	Executors of the Estate of the late Lala Shanker Das.	Allah Din, (m.), 36, Stone-cutter.	Coal	While deceased was setting timber near the face of a new road which was being driven through a longwall goaf a piece of shale 2' x 1' 6" x 4", fell from the roof from a height of 5 feet on to his back. He died from spinal injuries twenty-three days later. Inspection and inquiry made.
18	9th April, 9-30 P.M.	Upper Ghorawari mine, Junnordeo P. O., Central Provinces.	Bishambhernath Buddhoolal & Co.	Amirsa Gord, (m.), 17, Jindoo Mowasi, (m.), 16, Bhabutya Mowasi, (m.), 30, Loaders.	Coal	Three loaders had passed through a fence and commenced to load fallen coal when a mass of roof and side coal, about 20 tons in weight, fell from between two "slips" at a height of 10 feet, killing them instantly. Inspection and inquiry made.

19	9th April, 12-30 P.M.	Ena Mine, Jharua P. O., Bihar and Orissa.	North-West Coal Co., Ltd.	Chondhury Turi, (m.), 46, <i>Coal-cutter.</i>	Coal	Deceased entered a fenced area to load loose coal and was killed instantly by a mass of roof coal 20' x 16' x 3' 6" which fell from a height of 12 feet. Inspection and inquiry made.
20	13th April, 1 P.M.	Jamuria mine, Charanpur P. O., Bengal.	Equitable Coal Co., Ltd.	Tiboo Kuwar, (m.), 35, <i>Loader.</i>	Coal	A sirdar took four coal loaders into a fenced off goaf, from which props had been withdrawn, to remove fallen roof coal. The roof commenced to break and before all of them could escape it collapsed. One loader was killed instantly and the sirdar and another loader were severely injured. Inspection and inquiry made.
21	18th April, 9 P.M.	Sripur mine, Kalipahari P. O., Bengal.	Lodna Colliery, Co. (1920) Ltd.	Daso Turi, (m.), 35, <i>Loader.</i>	Coal	While a coal loader was at work near the edge of a goaf the roof started to "weight" and as he was hurriedly leaving the place he slipped and fell. A mass of stone 28' x 5' x 2' fell at the edge of the goaf after dislodging four props and a slab of stone slipped down the goaf debris and severed his right leg. He died from shock three and half hours later. Inspection and inquiry made.
22	20th April, 10-30 A.M.	Sitalpur mine, Dishergarh P. O., Bengal.	Bengal Coal Co., Ltd.	Joyram Teli, (m.), 46, <i>Labourer.</i>	Coal	While a prop 13 feet long was being reset in a depillaring area, a piece of coal weighing about 15 lbs fell from the roof striking the deceased and killing him instantly. Inspection and inquiry made.
23	26th April, 10-20 A.M.	South Goluckdih mine, Jharua P. O., Bihar and Orissa.	South Goluckdih Coal Co.	Karam Bhuiya, (m.), 30, <i>Coal-cutter.</i>	Coal	While deceased was returning to his working place in a depillaring area, a triangular mass of roof coal 7' x 2' x 5' thick, fell from a "slip" at a height of 16 feet. He was killed instantly. Inspection and inquiry made.
24	8th May, 10-30 P.M.	Bhowra mine, Jalgora P. O., Bihar and Orissa.	Eastern Coal Co., Ltd.	Sabi Baurin, (f.), 45, <i>Coal-carrier.</i>	Coal	Deceased and two coal-cutters went into a gallery, which had been fenced off on account of unsound roof, to cut floor coal. A mass of roof stone 12' x 6' x 8" fell from a height of 15 feet and she was killed instantly. Inspection and inquiry made.
25	11th May, 5-30 A.M.	Barkui mine, Parasia P. O., Central Provinces.	Pench Valley Coal Co., Ltd.	Mithoo Kalhar, (m.), 14, <i>Labourer.</i>	Coal	Deceased was killed by a piece of shale, about 2' x 1' 6" x 1' thick, which fell on his head from the roof of a gallery 5½ feet high. Inspection and inquiry made.
26	17th May, 2-20 P.M.	Serampur mine, Gridih P. O., Bihar and Orissa.	Government of India, Railway Department (E. I. Railway).	Mangoo Chamar, (m.), 36, <i>Coal-cutter.</i>	Coal	While deceased was attempting to bring down a mass of loose stone with a crowbar from above a support against the roof at a height of 8 feet, the stone fell on him inflicting injuries which proved fatal five hours later. Inspection and inquiry made.
27	19th May, 9-30 A.M.	North Damuda mine, Nulkhurkee P. O., Bihar and Orissa.	Shankar Lall Agar- wala.	Haralal Mahato, (m.), 26, <i>Munshi.</i>	Coal	Deceased entered a disused gallery, when a mass of roof stone, 5' x 4' x 1' thick, fell on him from a height of 7 feet. He was killed on the spot. Inspection and inquiry made.

APPENDIX II—contd.

Fatal Accidents during the year 1935—contd.

Serial number	Date and hour of accident.	Name and situation of mine.	Name of owner.	Name, sex, age and occupation of person killed.	Name of mineral worked.	Cause of accident and remarks.
FALLS OF ROOF AND SIDES—contd.						
(a) Falls of roof—contd.						
28	20th May, 10-45 P.M.	Standard (Benahir section) mine, Jharia P. O., Bihar and Orissa.	Standard Coal Co., Ltd.	Keshab Kora, (m.), 42, Coal-carrier.	Coal	A sirdar was engaged in testing the roof of a gallery 18 feet high when some coal weighing about 4 cwts. fell from the roof. A coal-carrier who had entered the gallery without the knowledge of the sirdar was struck by the coal and killed instantly. Inspection and inquiry made.
29	24th May, 11 A.M.	Standard (Benahir section) mine, Jharia P. O., Bihar and Orissa.	Standard Coal Co., Ltd.	Hari Teli, (m.), 25, Coal-carrier.	Coal	Deceased was engaged in loading coal in a gallery 26 feet high when a piece of stone 5' x 4' x 1/2" fell from the roof and struck his left leg behind the knee. He died fifteen days later as the result of heart failure caused by excessive atmospheric heat aggravated by diminished vitality due to his injury. Inspection and inquiry made.
30	28th May, 4-30 P.M.	Khas Pandedih mine, Sijua P. O., Bihar and Orissa.	R. G. Agarwalla	Bhata Kole, (m.), 45, Coal-cutter.	Coal	Deceased was working in a gallery, when a mass of roof stone, 13' x 7' x 1' thick, fell from a "slip" at a height of 7 feet killing him instantly. Inspection and inquiry made.
31	30th May, 3 P.M.	Sirampur mine, Giridih P. O., Bihar and Orissa.	Government of India, Railway Department (E. I. Railway).	Kodo Meah, (m.), 52, Timberman.	Coal	Deceased with others was setting an additional prop at the edge of a goaf about 200' x 175', when the roof fell without warning. Deceased was killed on the spot and another person sustained serious injuries. Inspection and inquiry made.
32	4th June, 1-30 P.M.	Angarpathra mine, Sijua P. O., Bihar and Orissa.	Union Coal Co., Ltd.	Chhattoe Kole, (m.), 23, Coal-carrier.	Coal	While working in a depillaring district of a seam 12 feet thick a coal carrier was struck by a mass of coal 25' x 5' x 9" which fell without warning from the roof of a gallery. He received injuries which proved fatal. Inspection and inquiry made.
33	7th June 4-30 P.M.	Ghorawari mine, Junnordeo P. O., Central Provinces.	Hirdagarh Collieries, Ltd.	Sheik Nawab, (m.), 35, Coal-cutter.	Coal	While the roof was on weight in a goaf a miner passed through a fence to bring out some coal from the edge of the goaf. The roof suddenly gave way and it is presumed that a piece of shale from the roof struck him on the head, fracturing the skull. He was killed almost instantly. Inspection and inquiry made.

34	16th June 5-30 A.M.	Majri mine, Warora P. O., Central Provinces.	Jamai-Majri Coal Co., Ltd.	Sambha Mahar, (m.), 22, <i>Labourer.</i>	Coal	While filling coal, deceased was killed by a fall of roof, about 12' x 6' x 6" thick, which suddenly became dislodged from a height of 6 feet. The fall exposed a hidden "slip" in the roof. Inspection and inquiry made.
35	12nd June, 9 A.M.	Pidhi mine, Dandot P. O., Punjab.	R. S. L. Ishar Das Kapur.	Alam Sher, (m.), 26, <i>Coal-cutter.</i>	Coal	While a miner was at work at the face of a gallery 6 feet high a piece of shale, 2' x 1' 6" x 1', fell from the roof and struck him on the back. He sustained injuries from which he died two hours later. Inspection and inquiry made.
36	26th June, 12 noon.	Jamadoha mine, Jalgora P. O., Bihar and Orissa.	Tata Iron and Steel Co., Ltd.	Behari Meah, (m.), 52, <i>Coal-cutter.</i>	Coal	Deceased was working on a rib of coal adjoining a goaf, when some coal fell liberating a mass of roof coal, which fell on him from a height of 7½ feet and killed him on the spot. Inspection and inquiry made.
37	27th June, 7 A.M.	Gaslitan mine, Sijna P. O., Bihar and Orissa.	New Manbhoom Coal Co. Ltd.	Raju Manjhi, (m.), 34, <i>Coal-cutter.</i>	Coal	Deceased was cutting coal at a "rib" adjoining a goaf, when coal fell from the "rib" and displaced some props, thereby liberating roof stone which fell from between "slips" at a height of 8 feet. He was killed on the spot. Inspection and inquiry made.
38	9th July, 2-10 P.M.	Dharmaband mine, Katrasgarh P. O., Bihar and Orissa.	New Tetturya Coal Co., Ltd.	Gora Mohali, (m.), 31, <i>Coal-cutter.</i>	Coal	Deceased was dressing coal from the side of a gallery when a mass of roof stone, measuring about 2' 6" x 1' 3" x 1' 6" fell on him from a height of 7' 9", inflicting serious injuries. He died eight days later. Inspection and inquiry made.
39	12th July, 1 A.M.	Ekra Khas mine, Bansjora P. O., Bihar and Orissa.	Maharaja S. C. Nandi.	Debi Turi, (m.), 35, <i>Sirdar.</i> Hiralal Teli, (m.), 30, <i>Labourer.</i>	Coal	Hearing sounds of the roof weighting a sirdar and a timberman, retreated to the edge of a working place in a depillaring district, when without warning a mass of roof stone 32' x 20' and 8 feet thick collapsed and they were killed instantly. Inspection and inquiry made.
40	16th July, 5 P.M.	Alkusa Nyadee mine, Kusnuda P. O., Bihar and Orissa.	Alkusa Nyadee Collieries, Co.	Ali Meah, (m.), 37, <i>Coal-cutter.</i> Daru Meah, (m.), 30, Safab Meah, (m.), 47, <i>Loaders.</i>	Coal	The deceased were loading coal in a depillaring area, when a mass of roof coal, 11' x 5' x 1', fell on them from a "slip" at a height of about 28 feet. They were killed instantly. Inspection and inquiry made.
41	20th July, 11 A.M.	Datla mine, Junnordeo P. O., Central Provinces.	Amalgamated Coal- fields, Ltd.	Kailash Koiri, (m.), 35, <i>Coal-cutter.</i>	Coal	While returning to his working place, a miner was killed by a mass of roof coal, about 13' x 8' x 9" thick, which fell from a height of six feet. The coal had been loosened by blasting about half hour prior to the occurrence. The accident would have been avoided had the shot-firer complied with the requirements of regulation 117. Inspection and inquiry made.

APPENDIX II—contd.

Fatal Accidents during the year 1935—contd.

Serial number.	Date and hour of accident	Name and situation of mine.	Name of owner.	Name, sex, age and occupation of person killed.	Name of mineral worked.	Cause of accident and remarks.
FALLS OF ROOF AND SIDES—contd.						
(a) Falls of roof—contd.						
42	22nd July, 12-45 P.M.	Dharmaband mine, Katrasgarh P. O., Bihar and Orissa.	D. N. Barat's Estate.	Pitum Ghuna, (m.), 45, Coal-cutter.	Coal	In a seam 3' 3" thick, a mass of stone, 20' x 15' x 6", fell from the roof and killed a miner who was walking to his working place. Inspection and inquiry made.
43	24th July, 10 P.M.	Standard (Jharua Khas) mine, Jharua P. O., Bihar and Orissa.	Standard Coal Co., Ltd.	Pooni Bourin, (f), 26, Coal-carrier.	Coal	A woman was resting near the corner of a pillar in a depillaring area, when about 2 cwts. of coal fell from the roof 16 feet above and she sustained serious injuries which proved fatal. Inspection and inquiry made.
44	3rd August, 6 P.M.	Seebpore mine, Charanpur P. O., Bengal.	Katras Jherriah Coal Co., Ltd.	Shyam Mahata, (m.), 40, Labourer.	Coal	While props were being withdrawn from a depillaring area a mass of stone 15' x 12' x 1' 3" fell at the edge of the goaf and dislodged four props, 15 feet long, one of which in falling struck a timber man. He died from injuries two and half hours later. Inspection and inquiry made.
45	15th August, 5 P.M.	Charanpur mine, Charanpur P. O., Bengal.	Apcar Collieries, Ltd.	Bansi Kalwar, (m.), 32, Coal-cutter.	Coal	A mass of roof coal 15' x 6' x 2' fell from the roof in a depillaring area after dislodging three props 16 feet long. In falling one of the props struck a miner on the head and caused fatal injuries. Inspection and inquiry made.
46	26th August, 12 noon.	Kustore mine, Kusunda P. O., Bihar and Orissa.	Ranegunge Coal Association, Ltd.	Shyاملal Dosadh, (m.), 42, Coal-cutter.	Coal	Deceased was cutting coal from a small rib of coal in a depillaring area when the rib collapsed allowing some roof coal to fall. He was killed instantly. Inspection and inquiry made.
47	6th September, 9 P.M.	Ledo-Valley mine, Ledo P. O., Assam.	Assam Railways and Trading Co., Ltd.	Pirshub Mussal- man, (m.), 30, Loader.	Coal	While some loaders were working in a gallery 5' x 5' 9" high a large mass of coal fell on them. One person was killed and another seriously injured. Inspection and inquiry made.
48	8th September, 3-30 A.M.	Kustore mine, Kusunda P. O., Bihar and Orissa.	Ranegunge Coal Association, Ltd.	Tejo Roy, (m.), 40, Loader.	Coal	While roof coal was being dressed after blasting a mass of coal about 4' 6" x 2' 6" x 1' 6", fell from a height of 15 feet and dislodged a prop. The prop struck a loader as he was attempting to escape, and inflicted injuries which proved fatal sixteen hours later. Inspection and inquiry made.

49	10th September, 10-15 A.M.	Sodepur (9 and 10 Pits) mine, Sundarchak P. O., Bengal.	Bengal Coal Co., Ltd.	C. G. Kouwen, (m.), 38, <i>Assistant Manager.</i>	Coal	When the extraction of a pillar of coal in a seam 14 feet thick was almost completed part of the remaining thin rib of coal collapsed and a miner was trapped under fallen coal but not very seriously injured. Deceased was endeavouring to release the miner when a mass of stone 20' x 15' x 1' 3" fell from between two "slips" in the roof and dislodged several props. While deceased was escaping he was struck on the head by the end of a falling prop and killed instantly. Inspection and inquiry made.
50	25th September, 5 A.M.	Lodna mine, Jharra P. O., Bihar and Orissa.	Lodna Colliery Co. (1920), Ltd.	Bhinkal Turi, (m.), 42, <i>Sirdar.</i>	Coal	A deceased was inspecting a working place in a depillaring district, a piece of roof stone, 2' x 2' x 4", fell from a height of 25 feet and he sustained serious injuries as the result of which he died two days later. Inspection and inquiry made.
51	27th September, 1 P.M.	Jainty Central mine, Karmatar P. O., Bihar and Orissa.	Jainty Central Col- lieries, Ltd.	Muku Meah, (m.), 28, <i>Coal-cutter.</i>	Coal	A miner knocked out a prop which was set within 4 feet of the working face in a depillaring section with the result that a mass of roof, 5' x 1' x 9" thick, fell from a height of 4 feet and severely injured two miners. One of them died one month later. Inspection and inquiry made.
52	3rd October, 1-40 P.M.	Amlabad mine, Jealgora P. O., Bihar and Orissa.	Eastern Coal Co., Ltd.	Deagol Manjhi, (m.), 28, <i>Coal-cutter.</i>	Coal	While deceased was driving a gallery, 9 feet high, a triangular mass of roof coal, 10' x 3' x 1' 3", fell from between two concealed "slips". He sustained serious injuries to which he succumbed a week later. Inspection and inquiry made.
53	15th October, 2-30 P.M.	Saltore mine, Dishergarh P. O., Bihar and Orissa.	Burrakur Coal Co., Ltd.	Sreemsti Mejhian, (f.), 32, <i>Loader.</i>	Coal	A mass of coal and shale weighing about 2 tons fell in the goaf at the edge a depillaring area and dislodged three props 15 feet long. The top end of one of the props fell on a coal carrier and killed her instantly. Inspection and inquiry made.
54	18th October, 3-30 P.M.	Loyabad mine, Banswara P. O., Bihar and Orissa.	Burrakur Coal Co., Ltd.	Khedan Singh, (m.), 35, <i>Coal-cutter.</i>	Coal	A mass of roof coal, 6' x 1' 6" x 1' 6", fell from a height of 9 feet in a working place and two men were seriously injured. One man died nine and a half hours later as the result of his injuries. Inspection and inquiry made.
55	22nd October, 11-30 A.M.	Dhori mine, Bokaro P. O., Bihar and Orissa.	Bokaro and Ram- gur Co. Ltd.	Jagaran Manjhi, (m.), 32, Moheswar Manjhi (m.), 23, <i>Coal-cutters.</i>	Coal	While a gang of five miners was engaged in dressing some overhanging coal from the side of a small pillar preparatory to its extraction, a mass of coal, 20' x 10' x 3', fell from between two concealed "slips" in the roof at a height of 8 feet. Two of the miners were killed outright and one received serious injuries. Inspection and inquiry made.

APPENDIX II—*contd.*

Fatal Accidents during the year 1934—*contd.*

Serial number.	Date and hour of accident.	Name and situation of mine.	Name of owner.	Name, sex, age and occupation of person killed.	Name of mineral worked.	Cause of accident and remarks.
FALLS OF ROOF AND SIDES—<i>contd.</i>						
(a) Falls of roof—<i>contd.</i>						
56	24th October, 4-30 P. M.	Sodepur (Nos. 9 and 10 Pits) mine, Sunderchak P. O., Bengal.	Bengal Coal Co., Ltd.	Anpi Kolin, (f.), 40, Coal-carrier.	Coal	While descending was loading a basket of coal a thin piece of roof stone fell on her from a height of 14 feet. She received injuries from which she died one week later. Inspection and inquiry made.
57	25th October, 4 A. M.	East Ballihari mine, Kusonda P. O., Bihar and Orissa.	K. D. Worah.	Chamari Bhuiya, (m.), 30, Coal-cutter.	Coal	While a coal-cutter was engaged in widening out a haulage road, a mass of stone, 9' x 3' x 1' 6" bounded by two 'slips' and two cleavage planes, which were not visible, fell from a height of 12 feet and killed him instantly. Inspection and inquiry made.
58	3rd November, 1 A. M.	Victoria mine, Kulti P. O., Bengal.	New Beerbhoom Coal Co., Ltd.	Janakram Teli, (m.), 35, Coal-cutter.	Coal	While a miner was dressing the roof in a depillaring area a mass of stone 4' x 2' 9" x 1' thick fell on him from a height of 6 feet. Inspection and inquiry made.
59	5th November, 3-30 P. M.	Gaslitan mine, Sijua P. O., Bihar and Orissa.	New Manbhoom Coal Co., Ltd.	Sukhar Singh, (m.), 35, Coal-cutter.	Coal	Deceased was engaged in depillaring work when a mass of roof stone, 25' x 7' x 1' 6", fell from a height of 8 feet and killed him instantly. Inspection and inquiry made.
60	9th November, 11-10 P. M.	Bararec mine, Jaulgora P. O., Bihar and Orissa.	East India Coal Co., Ltd.	Jhanda Meah, (m.), 45, Coal-cutter.	Coal	Deceased passed through a fence when a mass of roof coal, 4' x 3' 6" x 1' 9", fell on him from a "slip" in a gallery 25 feet high. He sustained serious injuries to which he succumbed a few minutes later. Inspection and inquiry made.
61	11th November, 10 A. M.	Khas Joyrampur mine, Jharia P. O., Bihar and Orissa.	Seth Tarachand Ghanashyamdas.	Haripada Panri, (m.), 40, Assistant fitter.	Coal	The exhaust pipe of a steam pump was being extended in a gallery, when a mass of roof, 3' x 1' 6" x 3", fell from a "slip" at a height of 25 feet. Deceased sustained injuries to which he succumbed the following day. Inspection and inquiry made.
62	26th November, 7-30 P. M.	Barmondia mine, Sitarampur P. O., Bengal.	New Beerbhoom Coal Co., Ltd.	Rithoo Charar, (m.), 35, Coal-cutter.	Coal	A sudden fall of roof in a goaf caused three props to become dislodged at the edge of the fall. A miner, who was extracting a pillar in the vicinity, was struck by a prop and fatally injured. Inspection and inquiry made.

63	3rd December, 1 P.M.	Junnordeo. No. 1 mine, Parasia P. O., Central Provinces.	R. S. H. Verma and M. Kanhaiyalal, Limited.	Sheik Jhuri, (m.), 28, <i>Coal-cutter.</i>	Coal	While a gang of miners was at work in a gallery 6' wide x 4' high, about 2 tons of roof coal fell down without any warning. One of them was killed instantly. His three companions escaped with slight injuries. The fall exposed two converging slips which were running along the middle of the gallery. Inspection and inquiry made.
64	4th December, 12-30 P.M.	Sodepur (Nos. 9 and 10 Pits) mine, Sundarchak P. O., Bengal.	Bengal Coal Co., Ltd.	Murut Turi, (m.), 38, <i>Coal-cutter.</i>	Coal	While undercutting the corner of a pillar, deceased caused a piece of roof coal, about 5' x 3' x 1' thick, to fall on his back from a height of 7 feet. He succumbed to his injuries one and half hours later. Inspection and inquiry made.
65	7th December, 6 P.M.	Shamlat Dandote mine, Dandot, Punjab.	Ram Lali Malik	Aka, (m.), 35, <i>Coal-cutter.</i>	Coal	Deceased was killed by a fall of roof.
66	7th December, 3-45 P. M.	Burra Golai mine, Margherita P. O., Assam.	Assam Railways and Trading Co., Ltd.	Habiz Ali, (m.), 43, <i>Contractor's Sirdar.</i>	Coal	While deceased was attempting to load fallen coal from an "opening" a fall of roof occurred. Deceased was buried and killed instantly. If deceased had obeyed the instructions of the sirdar this accident would not have occurred. Inspection and inquiry made.
67	12th December, 1 A.M.	Saltore mine, Disbargarh P. O., Bihar and Orissa.	Burrakur Coal Co., Ltd.	Nazir Singh, (m.), 48, <i>Contractor's representative.</i>	Coal	While dressing of over-hanging roof coal was going on in a depillaring section under the supervision of a sirdar, deceased walked beneath it, disregarding the warning given by the sirdar and two miners. A fall of roof, about 15' x 4' x 1', occurred at that moment. A portion of the fall struck deceased on the back from a height of 12 feet and injured him fatally. Inspection and inquiry made.
68	18th December, 1-25 P.M.	Sendra mine, Banajora P. O., Bihar and Orissa.	Sendra Coal Co., Ltd.	Amrit Mesh, (m.), 20, <i>Coal-carrier.</i>	Coal	A miner was dressing down some roof coal in a gallery, 9 feet high, when a mass of roof, 3' x 2' x 3', fell on deceased, who was standing nearby. He sustained injuries to which he succumbed four hours later. Inspection and inquiry made.
69	24th December, 6 A.M.	Januria mine, Charanpur P. O., Bengal.	Equitable Coal Co., Ltd.	Jumook Singh, (m.), 39, <i>Loader.</i>	Coal	While loading coal in an underground gallery a loader was fatally injured by a mass of coal, 3' x 1' 6" x 1' 6", which fell from a height of 7 feet. Inspection and inquiry made.
70	28th December, 2-30 P.M.	Bhalgora mine, Jharia P. O., Bihar and Orissa.	Bhalgora Coal Co., Ltd.	Kissun Kahar, (m.), 26, <i>Coal-cutter.</i>	Coal	While a pillar of coal in a seam 22 feet thick was under extraction a slab of coal, 4' x 3' x 9", fell from the roof and struck a miner fatally injuring him. Inspection and inquiry made.
71	29th December, 2-45 A.M.	Ghogri mine, Junnordeo P. O., Central Provinces.	Sial Coal Company	Darwa Khatik, (m.), 21, <i>Coal-cutter.</i>	Coal	While dressing down roof coal which was projecting from the corner of a pillar, a miner caused a piece of coal, 7' x 6' x 1 1/2' thick, to become dislodged from a height of six feet. The piece of coal struck him on the head, killing him instantly. Inspection and inquiry made.

APPENDIX II—contd.

Fatal Accidents during the year 1934—contd.

Serial number.	Date and hour of accident.	Name and situation of mine.	Name of owner.	Name, sex, age and occupation of persons killed.	Name of mineral worked.	Cause of accident and remarks.
FALLS OF ROOF AND SIDES—contd.						
<i>(b) Falls of Side—(72 deaths).</i>						
72	2nd January, 9-30 A. M.	Gua mine, Gua P. O., Bihar and Orissa.	Indian Iron & Steel Co., Ltd	Jambiri Ho. (m.), 22, Miner.	Iron ore.	Deceased was undercutting the side of an open working 8 feet deep when about 10 cu. feet of overburden fell and killed him instantly. Inspection and inquiry made.
73	4th January, 5 P.M.	Lodna (Nos. 4 & 5 Pits) mine, Jharua P. O., Bihar and Orissa.	Lodna Colliery Co. (1920), Ltd.	Shamshuddin Meah, (m.), 35, Coal-cutter.	Coal	While the side of a pillar in a depillaring area was being dressed, a piece of coal, 1' x 1' x 9", rolled against a prop and dislodged it. The prop struck deceased who was sitting about 20 feet away. He sustained serious injuries to which he succumbed two and a half days later. Inspection and inquiry made.
74	10th January, 3 P.M.	Gashtan mine, Sijua P. O., Bihar and Orissa.	New Manbhoom Coal Co., Ltd.	Akloo Malla, (m.), 30, Coal-cutter.	Coal	While deceased was attempting to dress overhanging coal from the corner of a pillar, a mass of coal, weighing about 5 tons, fell from a "slip" at a height of 7 feet. He was crushed under the fall and killed instantly. Inspection and inquiry made.
75	10th January, 10 A. M.	Telaingya Maybit mine, Tavoy P. O., Burma	U. Lu Nyo.	Mg. Shwe Bwint, (m.), 66, Tributor.	Tin	While a miner was at work in an open cast cutting, he was buried by a mass of earth, 20' x 15' x 4', which fell from the side. He was killed instantly. Inspection and inquiry made.
76	30th January, 4 P.M.	Tikuri mine, Katni Cement Factory P. O., Central Provinces.	Katni Cement and Industrial Co., Ltd.	Karia Bhumia, (m.), 16, Puchoo Kole, (m.), 40, Parbhi Kurmin, (f.), 14, Loaders.	Limestone	A mass of limestone, weighing about 7 or 8 tons fell from a ridge, 15 feet high, and killed three persons who were sitting at the bottom of the ridge. Inspection and inquiry made.
77	5th February, 3-45 P.M.	South Goluckdih mine, Jharua P. O., Bihar and Orissa.	South Goluckdih Coal Co.	Jharu Bhuiya, (m.), 36, Coal-cutter. Dhanva Bhuiya, (m.), 19, Coal-carrier.	Coal	While two miners were loading coal in a fenced area, a mass of coal weighing about one ton fell from the side of a pillar and they were killed instantly. Inspection and inquiry made.

78	6th February, About 6 P.M.	Dhowdand mine, Sasaram P. O., Bihar.	Public Works De- partment, Canal Department.	Bidhu Kewat, (m.), 32, Miner.	Stone	A labourer who was engaged in rolling down stones from the top slope of a hill, was found dead next morning by his fellow workers. There were no superficial marks of injury which could indicate that he had met with an accident. Inspection and inquiry made.
79	5th February, 12-20 P.M.	Sitalpur mine, Dishergarh P. O., Bengal.	Bengal Coal Co., Ltd.	Debi Turi, (m.), 46, Coal-cutter.	Coal	A split through a pillar was being commenced from an old gallery and shortly after a miner had commenced work there a mass of coal 3' x 2' 6" x 1' 3" fell from the side dislodging a prop 8 feet long. The end of the prop struck the miner on the head inflicting fatal injuries. Inspection and inquiry made.
80	11th February, 12 noon.	Baramondia mine, Sitarampur P. O., Bengal.	New Beerbhoom Coal Co., Ltd.	Sadhu Turi, (m.), 28, Coal-cutter.	Coal	While removing fallen coal from a depillaring area, deceased was struck by a mass of side coal, about 1 ton in weight, which suddenly became dislodged from a height of 6 feet. He was killed instantly. Inspection and inquiry made.
81	12th February, 4-30 P.M.	Nami mine, Namtin P. O., Burma.	Burma Corpora- tion, Ltd.	Lee Li Yu, (m.), 32, Labourer.	Lime- stone.	While a labourer was breaking stone at the base of a quarry he was struck by a piece of stone 12' x 8' x 2', which fell from a bench above—a height of 25 feet. He was fatally injured. Inspection and inquiry made.
82	14th February, 12 A.M.	South Barora mine, Niwagarh P. O., Bihar and Orissa	Virji Ranchhod Thacker.	Rano Mojhan, (f.), 55, Labourer.	Coal	Deceased was sitting down in a quarry when some loose overburden fell on her. She sustained serious injuries to her back which proved fatal several hours later. Inspection and inquiry made.
83	19th February, 11-15 A.M.	Sripur mine, Kulipahari P. O., Bengal.	Lodna Colliery Co. (1920) Ltd.	Prafulla Ch. Dutta, (m.), 39, Sirdar.	Coal	A sirdar was standing in a level gallery 7 feet high at the edge of an area from which a pillar was being extracted in a seam 14 feet thick. There was a heavy "bump" and a mass of coal weighing about 4 tons was dislodged from the roof coal at the end of the gallery and from the side of the pillar. He was struck by a large lump of coal and sustained fatal injuries. Inspection and inquiry made.
84	23rd February, 5-45 P.M.	Lodna mine, Jharua P. O., Bihar and Orissa.	Lodna Colliery Co. (1920) Ltd.	Jagu Bhuiya, (m.), 49, Loader. Rumabatar Kurmi, (m.), 44, Mahabir Passai, (m.), 48, Coal-cutters.	Coal	While a number of persons were engaged in loading coal in a depillaring area after blasting, a triangular mass of coal 8' x 2' x 12', fell from a soft "parting" against a drier. One person was killed on the spot and two other persons, both of whom afterwards died, were seriously injured. Inspection and inquiry made.
85	2nd March, 2 P.M.	Myekhanhaw mine, Tavoy P. O., Burma.	H. Kelly.	Mg. Tun Hline, (m.), 24, Tributor.	Tin and wolfram.	While cutting away the side of a tail race which was not a working place, a tributor was partially buried by a mass of schist, 22' x 7' x 4', which fell from a height of 7 feet. He was fatally injured. Inspection and inquiry made.

APPENDIX II—contd.

Fatal Accidents during the year 1935—contd.

Serial number.	Date and hour of accident.	Name and situation of mine.	Name of owner.	Name, sex, age and occupation of person killed.	Name of mineral worked.	Cause of accident and remarks.
FALLS OF ROOF AND SIDES—contd.						
(b) Falls of Side—contd.						
86	24th March, 1-30 P.M.	Pathrapara mine, Pakur P. O., Bihar and Orissa.	Chatterjee Shaw & Co.	Agrupi Mochi, (m.), 40, Labourer.	Stone	While deceased was working in a quarry below an over-hanging side he was struck by a boulder, 140 lbs in weight, which fell from a height of 8 feet. He was killed instantly. If the side had not been undercut the accident might not have been occurred. Inspection and inquiry made.
87	2nd April, 11 P.M.	Chinchuria mine, Asansol P. O., Bengal.	New Beerbhoom Coal Co., Ltd.	Sami Dhanga (f.), 22, Loader.	Coal	While a loader was filling a basket with coal where the side of a pillar was being dressed a mass of coal 9' x 4' x 3' and wedge shaped fell off the side and killed her instantly. Inspection and inquiry made.
88	3rd April, 1-30 P.M.	Pandeberra mine, Jharia P. O., Bihar and Orissa.	Pandeberra Colliery Co.	Futka Beldar, (m.), 35, Coal-cutter.	Coal	Deceased was cutting coal from the side of a quarry about 40 feet high, when a mass of coal 4' x 3' x 12' high, fell on him from near the floor. He sustained serious injuries from which he afterwards died. Inspection and inquiry made.
89	6th April, 9-30 P.M.	Grandodih mine, Kusunda P. O., Bihar and Orissa.	Central Alkusa Colliery Co.	Nakul Mahato, (m.), 25, Coal-cutter.	Coal	A miner was seriously injured by a mass of coal, 9' x 3' x 16", which fell from a "slip" in the side of a pillar at a height of 8 feet. He died fourteen days later. Inspection and inquiry made.
90	13th April, 2-15 P.M.	Ballihari mine, Kusunda P. O., Bihar and Orissa.	Ballihari Colliery Co., Ltd.	Chaito Mahato, (m.), 30, Loader.	Coal	While loading coal deceased was struck and killed instantly by a mass of coal, measuring about 4' x 3' x 10", which fell from two converging "slips" in the side of a pillar at a height of 9 feet. Inspection and inquiry made.
91	17th April, 7-30 P.M.	Kustore Mine, Kusunda P. O., Bihar and Orissa.	Raveegunge Coal Association, Ltd.	Khnya Teli, (m.), 32, Coal-cutter.	Coal	While deceased was walking along an underground haulage road, a piece of coal 2' x 1' fell from the side of a pillar and struck him. He sustained a serious injury and died nine and half hours later. Inspection and inquiry made.

92	18th April, 8-10 A.M.	Gna mine, Gna P. O., Bihar.	The Indian Iron and Steel Co., Ltd.	Matias (m.), 24, Driller.	Iron ore	While drilling was proceeding on the slope of open excavation, a machine driller unexpectedly dislodged a block of ore in which he was drilling and lost his balance. He fell with the ore through a height of 12 feet and sustained injuries which proved fatal 6 hours later. Inspection and inquiry made.
93	18th April, 6-15 P.M.	Bardigi mine, Jharia P. O., Bihar.	Anderson Wright & Co.	Puni Baurin, (f.), 22, Coal-carrier.	Coal	While engaged in carrying coal from a working place, a woman was struck and fatally injured by a mass of coal, 4' x 3' x 6', which fell from the side of a pillar at a height of 10 feet. Inspection and inquiry made.
94	23rd April, 9-30 A.M.	Taljhari mine, Taljhari Stone Quarry P. O., Bihar and Orissa.	T. S. Samanto	Thegu Moshar, (m.), 55, Stone-breaker.	Stone	While deceased was rolling a stone from below the overhanging side of a quarry a stone about 100 lbs. in weight fell from the side from a height of 14 feet. He sustained serious injuries to which he succumbed four hours later. Inspection and inquiry made.
95	4th May, 9-15 A.M.	East Gopalichuck mine, Jharia P. O., Bihar and Orissa.	Gopalichuck Coal Co., Ltd.	Sukdas Chamar, (m.), 38, Coal-cutter.	Coal	While working in a depillaring district a miner was killed instantly by a mass of coal weighing about 30 cwts. which fell from the side of a pillar in his working place. Inspection and inquiry made.
96	12th May, 10 A.M.	Widnes mine, Tavoy P. O., Burma.	High Speed Steel Alloys Mining Co., Ltd.	Sanniah Kouteah, (m.), 22, Tributor.	Wolfram	Contrary to orders three tributors were undercutting the bank at the top of a disused prospecting shaft, when a mass of earth, 6' x 5' x 2', fell from the bank from a height of 9 feet. One of the tributors was partially buried and rescued alive, but deceased was completely buried and suffocated. Inspection and enquiry made.
97	14th May, 1-30 P.M.	Bailihari Colliery, Kusnuda P. O., Bihar and Orissa.	Bailihari Colliery Co., Ltd.	Dhya, (f.), 39, Loader.	Coal	While deceased was loading a basket of coal in a depillaring area, a miner who was cutting coal nearby, released a mass of coal 2' x 1' x 1' 6', which fell on her from a height of 10 feet. She sustained serious injuries to which she succumbed a few minutes later. Inspection and inquiry made.
98	17th May, 6 A.M.	Bokaro mine, Bokaro P. O., Bihar and Orissa.	East Indian Rail- way and Bengal Nagpur Railway.	Mansa Ram Painka, (m.), 38, Coal-cutter.	Coal	In an opencast mine deceased was levering down coal, partially loosened by blasting, from the side of a bench about 30 feet high, when a mass of coal, weighing about 12 tons, fell. He too fell with the coal and was killed instantly. Inspection and inquiry made.
99	17th May, 11 A.M.	Patnaboua mine, Bakudih P. O., Bihar and Orissa.	Nanji Mowji.	Chotka Sonthal, (m.), 35, Labourer	Stone	While three persons were pulling out a boulder, about 24 feet in diameter from the side of a quarry it suddenly fell and struck one of them killing him instantly. Inspection and inquiry made.

APPENDIX II—*contd.*

Fatal Accidents during the year 1935—*contd.*

Serial number.	Date and hour of accident.	Name and situation of mine.	Name of owner.	Name, sex, age and occupation of person killed.	Name of mineral worked.	Cause of accident and remarks.
FALLS OF ROOF AND SIDE—<i>contd.</i>						
Falls of Side—<i>contd.</i>						
100	30th May, 6-15 A. M.	Dishergarh West mine, Dishergarh P. O., Bengal.	Equitable Co., Ltd.	Coal Jugal Bauri (m.), 42, Coal-cutter.	Coal	While a miner was "robbing" coal from the side of a gallery in a depillaring area a mass of coal weighing about 1 ton fell from the side from a height of 5 feet and he sustained serious injuries. He succumbed nine days later. Inspection and inquiry made.
101	15th June, 2 P. M.	Standard (Benahir section) mine, Jharia P. O., Bihar and Orissa.	Standard Coal Co., Ltd.	Dhorhe Meah, (m.), 20, Labourer.	Coal	Deceased was assisting to lift a fallen prop, when a small piece of coal fell from an adjoining pillar. On attempting to get clear, he slipped and fell on some stones, lying on the floor. He sustained serious injuries to which he succumbed shortly afterwards. Inspection and inquiry made.
102	16th June, 7 A. M.	Jamnria mine, Charanpur P. O., Bengal.	Equitable Coal Co., Ltd.	Bonowari Meah, (m.), 35, Coal-cutter.	Coal	While a miner was resting in a gallery in close proximity to a depillaring area a piece of coal weighing about 35 lbs. burst off the side at a height of 8 feet and fell on his left leg. He was severely injured and died from shock eight hours later. Inspection and inquiry made.
103	27th June, 5-25 A. M.	Banksimula mine, Charanpur P. O., Bengal.	Bengal Coal Co., Ltd.	Chuna Bhadr Arack, (m.), 42, Coal-cutter.	Coal	After firing a shot in a pillar which was being extracted a miner was dressing the side with a sabol when a mass of coal weighing about one ton suddenly fell. He was struck and sustained injuries from which he died thirty minutes later. Inspection and inquiry made.
104	12th July, 3-30 P. M.	Sitapahar mine, Barharwa, P. O., Bihar and Orissa.	Nanji Mowji . .	Lal Behari Noonias, (m.), 26, Quarryman.	Stone	Deceased was levering down a boulder, 5' x 3' x 3', from the side of a quarry when it fell on to him from a height of 5 feet. He sustained injuries which proved fatal 9 days later. Inspection and inquiry made.
105	13th July, 9 P. M.	Lakshmi mine, Tisri P. O., Bihar and Orissa.	Kishan Chand Ram	Chandaku Manjhi, (m.), 25, Jhari Manjhi, (m.), 22, Miners.	Mica	While engaged in removing debris from a drain, two workmen were buried and suffocated by a mass of earth, 9' x 7' x 3', which fell from the side. Inspection and inquiry made.

106	31st July. 2-30 P.M	Kuchwar (Bharuh) mine, Banjari. P. O., Bihar and Orissa	Kuchwar Lime and Stone Co.	Haridas Singh, (m.), 35 Contractor.	Limestone	Deceased was attempting to bring down a boulder, 8' x 5' x 2' from the top of a bench of a quarry, 8 feet high, when the boulder rolled on to him and killed him instantly. Inspection and inquiry made.
107	1st August, 1-20 P.M.	Lodna mine, Jharia P. O., Bihar and Orissa.	Lodna Colliery Co., (1920) Ltd.	Titree Pashi, (m.), 41, Coal-cutter.	Coal	While two miners were drilling shot holes at the bottom of a pillar under extraction, a sudden weight in the goaf released a mass of coal from the side. One of them was fatally injured and the other received slight injuries. Inspection and inquiry made.
108	8th August, 3-30 A.M.	Saltore mine, Dishergarh P. O., Bihar and Orissa	Burrakur Coal Co., Ltd.	Hela Bauri, (m.), 45, Coal-cutter.	Coal	Deceased passed through a fence and was loading fallen coal at the side of a pillar when a mass of coal 10' x 1'6" x 3', fell on him from the side. He sustained serious injuries which proved fatal sixteen days later. Inspection and inquiry made.
109	11th August, 4-30 A.M.	Sitalpur mine, Dishergarh P. O., Bengal.	Bengal Coal Co., Ltd.	Sreekanta Bauri, (m.), 50, Coal-cutter.	Coal	A mass of coal 9' x 5' x 2', fell from the corner of a pillar from a height of 2½ feet and killed a miner instantly. Inspection and inquiry made.
110	11th August, 8-30 A.M.	Kanbank mine, Kanbank, Burma.	Kanbank Mines, Ltd.	Ohn Tin, (m.), 22 Labourer.	Tin and wolfram.	A labourer was working near the entrance to an old tunnel which had been fenced off for a long time when a fall of earth occurred which buried him, when recovered he was found to be dead.
111	13th August, 2-45 A.M.	Kustore mine, Kusunda P. O., Bihar and Orissa.	Raneegunge Coal Association, Ltd.	Bhairo Pasi, (m.), 40, Loader.	Coal	While deceased was filling a basket with coal in a depillaring area, a mass of coal, 3' x 2' x 1', fell from the side of a pillar under extraction. He sustained injuries which proved fatal three days later. Inspection and inquiry made.
112	23rd August, 5-30 A.M.	Bararoo mine, Jealgora P. O., Bihar and Orissa,	East Indian Coal Co., Ltd.	Mungai Gord, (f.), 26, Coal-carrier	Coal	While a woman was loading a basket with coal in a gallery 24 feet high, a mass of coal, weighing about 7 cwt. fell upon her from a height of 20 feet. She received serious injuries which proved fatal soon after. Inspection and inquiry made.
113	29th August, 2-15 A. M.	Majri mine, Majri. P. O., Central Provinces.	Jamai-Majri coal Co., Ltd.	Istari Madgi, (m.), 35 Coal-cutter.	Coal	Deceased was drilling a shot hole in a shale band with a view to robbing coal from the side of a pillar. A mass of shale, about 4' 2" x 2' 3" x 1' 6" thick, fell on his back, killing him instantly. Inspection and inquiry made.
114	29th August, 11 A. M.	Jogipalle mine, Saidapuram P. O., Madras.	P. Veeswariah	Betta Kaladu, (m.), 50 Miner.	Mica	While deceased was returning to his working place after drinking water he stepped over the loose edge of an excavation and fell down to a depth of 15 feet. The loose side 3' 6" x 9' x 6", fell on him inflicting serious injuries which proved fatal six hours later. Inspection and inquiry made.

APPENDIX II--contd.

Fatal Accidents during the year 1935—contd.

Serial number.	Date and hour of accident.	Name and situation of mine.	Name of owner.	Name, sex, age and occupation of person killed.	Name of mineral worked.	Cause of accident and remarks.
FALLS OF ROOF AND SIDE—contd.						
(b) Falls of Sides—contd.						
115	1st September, about 2 A. M.	Gaslitan mine, Sijua P. O., Bihar and Orissa.	New Manbhoom Coal Co., Ltd.	Babalal Manjhi, (m), 30, Coal-cutter.	Coal	While deceased was dressing coal from a pillar in a gallery 16 feet high, a mass of coal weighing about 3 tons fell from the side and he received injuries from which he died almost immediately. Inspection and inquiry made.
116	3rd September, 8-15 A. M.	Hormyingyi mine, Hermyingyi P. O., Burma	Consolidated Tin Mines of Burma, Limited.	Bo Ke, (m), 20, Machine Driller.	Tin	While a driller was barring down some loose stone from the side of a level, a mass of rock, 15' x 9' x 3', fell from a "slip" in the side—a height of 16 feet. He was buried and killed instantly. Inspection and inquiry made.
117	6th September, 1-50 A. M.	South East Baraboni mine, Charanpur P. O., Bengal.	Maharajah S. C. Nandy	Boila Manjhi, (m), 34, Coal-cutter.	Coal	In a gallery $6\frac{1}{2}$ feet high a miner undercut the face to a depth of 15 inches between two cleats and exposed another cleat. He released a mass of coal 5' x 3' x 1' x 3", which fell on him and killed him instantly. Inspection and inquiry made.
118	10th September, 2-45 P. M.	Ballihari mine, Kusunda P.O., Bihar and Orissa.	Ballihari Colliery Co., Ltd.	Againi Bauri (m), 32, Coal-cutter	Coal	While the side of a pillar was being dressed preparatory to its extraction, a mass of coal measuring about 2' x 1' 6" x 9' fell from a height of 15 feet and dislodged a prop. The prop struck a miner as he was attempting to escape, and inflicted injuries which proved fatal shortly after. Inspection and inquiry made.
119	16th September, 8-30 A. M.	Victoria mine, Kulti P. O., Bengal.	New Beerbhoom Coal Co., Ltd.	Peari Hazra, (m), 36, Coal-cutter.	Coal	While pushing an empty tub on a tramline, a miner was struck on the back by a piece of shale, about 2' x 1' 6" x 1' thick, which fell from a height of six feet. He sustained a fracture of the spine and died thirteen days later. Inspection and inquiry made.
120	29th September, 2 P. M.	Pagaye mine, Tavoy P. O., Burma.	H. G. Gregson	Po Loo Doo, (m), 74, Tributator.	Wolfram.	While a tributator was working in a sluicing channel, he was struck by a mass of earth, 5' x 5' x 1', which fell from the side—height of 5 feet. He was killed instantly. Inspection and inquiry made.

121	30th September, 11-15 P.M.	Bararee mine, Jalgora P. O., Bihar and Orissa.	East Indian Coal Co., Ltd.	Sahadeo Chamar, (m), 32, Coal-carrier.	Coal	While working in a depillaring area in a seam 25 feet thick, a miner sustained fatal injuries when a mass of coal, approximately 2 tons in weight, fell from the side of a pillar. Inspection and inquiry made.
122	2nd October, 7 P.M.	Kustore (Alkusa sec- tion) mine, Kusunda P. O., Bihar and Orissa.	Ranergunge Coal association, Ltd.	Rosan Meah, (m), 31, Coal-cutter.	Coal	Deceased entered a fenced off area in a depillaring section in order to obtain some loose coal and while he was working there was killed instantly by a mass of coal weighing about 5 tons which fell from the side of a pillar. Inspection and inquiry made.
123	9th October, 2 A.M.	South Samla mine, Pandaveswar P. O., Bengal.	South Samla Col- liery Co.	Bam Manjhi, (m), 35, Coal-cutter.	Coal	While robbing the corner of a pillar, a miner released a block of coal, about 10' x 4' x 2' 6", which fell on him from a height of 10 feet. He was killed instantly. Inspection and inquiry made.
124	15th October, 8 A.M.	Meke Myebya mine, Tavoy P. O., Burma.	Lim Kyi Yan	Bresnin, (m), 55, Bardam Burdoe, (m), 25, Tributors	Tin and Wol- fram.	While two tributors were undercutting the side of sluicing channel, they were buried by mass of earth, 11' x 7' x 1' 4", which fell from the side—a height of 7 feet. Both died from suffocation before they could be extricated. Inspection and inquiry made.
125	16th October, 4-15 P.M.	Kusunda-Nayadee mine, Kusunda P. O., Bihar and Orissa.	Kusunda Nayadee Collieries, Ltd.	Gora Manjhi, (m), 46, Coal-cutter.	Coal	A miner was working in a gallery 22' 9" high when a mass of stone band and coal, 5' x 3' 6" x 1' 6", fell from a height of 7 feet and he received injuries which proved fatal. Inspection and inquiry made.
126	21st October, 12-45 A.M.	Yemone mine, Mergui, Burma.	Island Tin Sindi- cate.	Ba Gyi, (m), 26, Labourer	Tin	Deceased was working in a surface sluice when a fall of stone occurred, and hit him on the head fracturing his skull.
127	1st November, 5 P.M.	Pagayo mine Tavoy P. O., Burma.	Teh Lu Pe	Mg. Tha Shwe, (m), 20, Tributor.	Tin and wolfram	While at work in an opencast excavation, a tributor was buried and suffocated by a mass of earth and stones, 6' x 5' x 4', which fell from the side—a height of 5 feet. Inspection and inquiry made.
128	8th November, Between 12 noon to 9 P.M.	Wilnos mine, Tavoy P. O., Burma.	High Speed Steel Alloys Mining Co., Ltd.	Chi Yon, (m), 40, Tributor.	Wolfram	Contrary to orders a tributor was working in a sluicing channel when he was struck by a mass of earth, 5' x 5' x 3', which fell from the side—a height of 10 feet, and buried him. He was suffocated. Inspection and inquiry made.
129	15th November, 2-30 P.M.	Kondwadih mine, Bhaga P. O., Bihar and Orissa.	Harriladih Coal Co., Ltd.	Gopin Manjhi, (m), 27, Coal-cutter	Coal	While loading coal in a depillaring area, a miner was struck by a mass of coal, about 4' x 4' x 4", which fell from the side of a pillar, about 7 feet high. He sustained injuries and died twelve days later. Inspection and inquiry made.
130	18th November, 12-10 P.M.	Jamadoba mine, Jalgora P. O., Bihar and Orissa.	Tata Iron & Steel Co., Ltd.	Kunji Shaw, (m), 59, Coal-carrier	Coal	While working in a gallery 7 feet high a coal carrier was fatally injured by a mass of coal 10' x 7' x 2' which fell from the side of a pillar. Inspection and inquiry made.

APPENDIX II--contd.

Fatal Accidents during the year 1935--contd.

Serial number.	Date and hour of accident.	Name and situation of mine.	Name of owner.	Name, sex, age and occupation of person killed.	Name of mineral worked.	Cause of accident and remarks.
FALLS OF ROOF AND SIDES--concl'd.						
(b) Falls of Sides--concl'd.						
131	19th November, 7-30 P.M.	Sripur mine, Kalipahari P. O., Bengal.	Lodna Colliery Co. (1920) Ltd.	Mogul Meah, (m.), 28; Audi Bhuiya, (m.), 32, Loaders	Coal	While a number of persons were loading coal in a depillar- ing area a 'bump' occurred in the goaf causing a mass of coal 14' x 7' x 3' to fall from the rib left against the goaf. Two persons were caught by the fall and fatally injured. Inspection and inquiry made.
132	29th November, 11 A.M.	Kitaburu mine, Chaibassa P. O., Bihar.	N. N. Kumar.	Madhua Ho, (m.), 17, Miner.	Chromite	After hearing a warning that blasting operations were to be conducted in an adjacent place, deceased with his compa- nion retired for safety into an old abandoned quarry when a big boulder at the edge of the excavation fell upon him from a height of 6 feet. He received serious injuries which proved fatal shortly after. Inspection and inquiry made.
133	28th November, 9 A.M.	Hpaungdaw mine, Tavoy P. O., Burma.	Quah Cheng Guam.	Dasar, (m.), 20, Miner.	Wolfram	While a miner was working in a prospecting shaft, 8 feet deep and 6 feet square, a boulder, 4' x 1' 6" x 1' 6", fell from the side--a height of 2½ feet, and fatally injured him. Inspection and inquiry made.
134	31st December, 2 P.M.	Kankanee mine, Banajera P. O., Bihar and Orissa.	Eastern Coal Co., Ltd.	Jagat Ram, (m.), 51, Coal-cutter.	Coal	While a miner was dressing down the corner of a pillar a piece of coal weighing about 60 lbs, fell from the side and he sustained an injury which proved fatal. Inspection and inquiry made.
135	31st December, 3 P.M.	Kabutra, Dharhara, Bihar and Orissa.	Jugal Singh.	Bhajam Modi, (m.), 45 Labourer.	Slate	Deceased was struck and killed by a stone thrown from a charge of explosive fired 200 feet away.
IN SHAFTS (FALLING DOWN SHAFT)--(4 deaths).						
136	25th February, 10-30 P.M.	Heinda mine, Tavoy P. O., Burma.	Anglo-Burma Co., Ltd.	Tin Arkitaw Mouggeraj, (m.), 25, Miner.	Tin	While at work in an exploratory adit a miner fell down a prospecting winze, 23 feet deep, and was fatally injured. Inspection and inquiry made.

137	29th August, 1 A.M.	Bisunpur mine, Tisri P. O., Bihar.	Kishan Chand Ram	Daria Ghatwarin, (f), 30, <i>Labourer.</i>	Mica	While engaged in drawing mine waste from a shaft, 80 feet deep, deceased fell from the surface to the bottom of the shaft and was killed instantly. Inspection and inquiry made.
138	25th November 5 30 A.M.	Lakarkra mine, Katrasgarh P. O., Bihar and Orissa.	Lakarkra Coal Co., Ltd.	Kartik Rajawar, (m.), 38, <i>Trolleyman.</i>	Coal	Deceased was pushing a loaded tub from a cage which was not resting properly on the keps. The cage tilted, and he fell from the cage a distance of 130 feet to the bottom of the shaft. Inspection and inquiry made.
139	7th December, 11 P.M.	Kajora mine, Kajoragram P. O., Bengal.	Guzdar Kajora Colliery Co., Ltd.	Rakho Hari Bauri, (m.), 26, <i>Coal-cutter.</i>	Coal	While ascending a shaft 175 feet deep, deceased fell off the cage to the bottom of the shaft and was fatally injured. If the gates of the cage had been fixed properly, this accident would have been avoided. Inspection and inquiry made.
IN SHAFTS (THINGS FALLING DOWN SHAFT)—(5 deaths).						
140	4th February, 5 A.M.	Phularitand mine, Nawagarh P. O., Bihar and Orissa.	Chandanmull Indra- kumar.	Bhikhari Teli, (m.), 45, Ramdhani Teli, (m.), 25, <i>Stone-cutters.</i>	Coal	The deceased with two other persons were employed at the bottom of a sinking shaft, 174 feet deep. Two planks of the trolley covering the top of the shaft were broken when a loaded bucket landed on them. The broken planks fell down the shaft and killed the deceased on the spot. Inspection and inquiry made.
141	26 April, 5-15 A.M.	Sirka mine, Sirka P. O., Bihar and Orissa.	South Karanpura Coal Co., Ltd.	Puran Singh, (m.), 27, <i>Underground Trammer.</i>	Coal	While a loaded tub was being pushed into a cage at the bottom of a shaft the cage was suddenly raised. The tub fell down and struck a trammer who was pushing another tub in. He received injuries which proved fatal twenty two days later. Inspection and inquiry made.
142	20th June, 1 A.M.	Poniat-Baraboni mine, Cheranpur P. O., Bengal.	H. K. Nag.	Ishu Sheikh, (m.), 30, <i>Sinker.</i>	Coal	While a basket containing shale was being raised by hand to the surface of a sinking shaft 25 feet deep, it caught a girder supporting the landing platform and a small piece of shale fell out of the basket on the head of a sinker. He died thirteen hours later. Inspection and inquiry made.
143	23rd September, 7-30 A.M.	Badjna mine, Nirbhachati P.O., Bihar and Orissa.	B. Mukherjee & Co.	Piru Manjhi, (m.), 26, <i>Coal-cutter.</i>	Coal	An empty tub fell down a shaft 149 feet deep. A miner who heard the tub falling became confused and ran across the bottom of the shaft and was struck by the falling tub and killed instantly. Inspection and inquiry made.

APPENDIX II—contd.

Fatal Accidents during the year 1935— contd.

Serial number.	Date and hour of accident.	Name and situation of mine.	Name of owner.	Name, sex, age and occupation of persons killed.	Name of mineral worked.	Cause of accident and remarks.
IN SHAFTS (MISCELLANEOUS)—(2 deaths).						
144	9th May, 5 P.M.	Katraa-Choitodih mine, Katraagarh P.O., Bihar and Orissa.	Burrakur Coal Co., Ltd.	Ghansyam Rowt, (m), 40, <i>Underground Trolleyman.</i>	Coal	An empty tub had been partly pushed out of the cage at the bottom of a shaft when the coupling hook caught in one of the catches for retaining tubs on the cage. Deceased was endeavouring to release the hook when the cage was suddenly raised, and he was caught between the cage and protective roofing at the bottom of the shaft. He sustained serious injuries to which he succumbed the following day. Inspection and inquiry made.
145	18th December, 4-45 A.M.	Haripur mine, Chora P.O., Bengal.	Chandanmul Indrakumar	Jadu Bagdi, (m), 43, <i>Loader</i>	Coal	While standing in the way of a descending cage, deceased was struck by it and fatally injured. Inspection and inquiry made.
SUFFOCATION BY GASES—(4 deaths).						
146	13th September, 8-30 A.M.	Toposi mine, Toposi P.O., Bengal.	Fansra Coal Co., Ltd.	Kali Bauri, (m), 22; Bhatu Bhuiya, (m), 45, <i>Labourers.</i>	Coal	A hole 4 feet in diameter and 8 feet deep in a subsidence close to the outcrop of a seam which had been depillared many years ago was about to be filled. A labourer who was sitting at the edge of the hole was overcome by "black-damp" and fell into the hole and a fellow worker who tried to rescue him was also overcome. They died from suffocation before they were rescued twenty minutes later. Inspection and inquiry made.
147	26th November, 8 A.M.	Shamlat Dandote mine, Dandot P.O., Punjab.	Lalla Ram Lal Chhokra Malik.	Harnam Singh, (m), 30, <i>Sirdar</i> ; Nazam Din, (m), 28, <i>Coal-cutter.</i>	Coal	A mine manager and a sirdar went exploring along an old road which passed through a longwall goaf. The sirdar who carried an electric torchlight went ahead and was overcome by blackdamp. About half an hour later a miner who also carried a torchlight went along the road to try and rescue the sirdar and was similarly overcome and suffocated. Inspection and inquiry made.

BY EXPLOSIVES—(7 deaths).

148	19th May, 2-30 A.M.	Hermyingyi mine, Tavoy P. O., Burma.	Consolidated Tin Mines of Burma Ltd.	Subbaya Pillai, (m.), 35, <i>Machine Driller.</i>	Tin and wolfram	During shot-firing operations a machine driller failed to take shelter, and was struck by a piece of rock which was projected by a shot fired at a place, 152 feet distant. He was fatally injured. Inspection and inquiry made.
149	24th May, 10 A.M.	Chittinguru mine, Chaibussa P. O., Bihar.	Raghrum Marwari	Madhu Ho., (m.), 30, <i>Driller.</i>	Chromite.	While a shot hole was being drilled on the floor of an open cast excavation, the drill accidentally struck a misfired shot which was left as a result of blasting on the previous day, and an explosion occurred. Deceased, who was a driller, received serious injuries which proved fatal 8 days later. Inspection and inquiry made.
150	16th August, 10 A.M.	Tatila mine, Bura Jemda, Bihar and Orissa.	Dwarakadas Agar- walla.	Bodhu, (m.), 30, <i>Miner.</i>	Manga- nese.	Deceased was drying gun-powder in an earthen pot over a fire when the gunpowder exploded, burning him so badly that he died.
151	3rd November, 3-30 A.M.	Kustore mine, Kusunda P. O., Bihar and Orissa.	Raneegunge Coal A-ssociation, Ltd	Thano Mahato, (m.), 50, <i>Shot-firer.</i>	Coal	While a shot-firer was connecting up the ends of the detonator wires in a number of shot-holes in a steep stone drift which were charged with high explosives, one of the shots discharged and he was killed instantly. It is presumed that he slipped and in falling pulled the wires of the detonators and so caused the charge to be detonated. Inspection and inquiry made.
152	25th November, 2-30 P.M.	Bhangia Guroote mine Japla P. O., Bihar.	Sone Valley Port- land Cement Co., Ltd.	Akbar Khan, (m.), 42, <i>Shot-firer.</i>	Lime- stone.	While a shot hole, 20' in depth, was being charged with gelignite, an explosion occurred and injured deceased seriously. He died of his injuries three weeks after the accident. Inspection and inquiry made.
153	12th December 5-15 P.M.	Bhowra mine, Jalgora P. O., Bihar and Orissa.	Eastern Coal Co., Ltd.	Ramlagan Malla, (m.), 30, <i>Shot-firer.</i>	Coal	A shot-firer was fatally burnt by a quantity of gunpowder, in a wooden box, which was accidentally ignited. Inspection and inquiry made.
154	16th December, 2-30 P.M.	Shahyedaung mine, Aloin, Burma.	Government of Burma Jail Department.	Nga Hla Gynw, (m.), 35, <i>Cultivator</i>	Stone	Deceased was killed by the explosion of a misfired charge of high explosive in a boulder. The existence of the misfired charges was not suspected.

IRRUPTIONS OF WATER—(11 deaths).

155	16th January, 9-30 P.M.	Loyabad mine, Parsjora P. O., Bihar and Orissa.	Barrakur Coal Co., Ltd.	Niru Roy, (m.), 32, Dinu Mahuli, (m.), 35, Dagan Mahuli, (m.), 28,	Coal	An underground gallery was being driven when it connected with some old water-logged workings not shown on the mine plan. There was a sudden irruption of water which flooded several working places and drowned eleven persons. Inspection and inquiry made.
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APPENDIX II—contd.

Fatal Accidents during the year 1935—contd.

Serial number	Date and hour of accident.	Name and situation of mine.	Name of owner.	Name, sex, age and occupation of person killed.	Name of mineral worked.	Cause of accident and remarks.
155	- contd.			IRRUPTION OF WATER—(11 deaths)—contd.		
				Chaman Kole, (m.), 35, Barku Kole, (m.), 30, Murat Kole, (m.), 22, Coal-cutters; Sukri Kamin, (f.), 25, Bandia Kamin, (f.), 20, Ganesh Mahuli, (m.), 20, Taria Kamin, (f.) 18, Coal-carriers; Rambaran Chamar, (m.), 25, Pump man.		
				HAULAGE—(22 deaths).		
156	7th January, 11 P.M.	Bhamori mine, Parasia P.O., Central Provinces.	Amalgamated Coal fields, Ltd.	Sheesewak Bra min, (m.), 28, Signaller.	Coal	While a set of seven full tubs was being pulled up an under- ground haulage road the set was derailed. A signaller, who, contrary to orders, was riding on the set was thrown off and killed. Inspection and inquiry made.
157	12th January, 7-30 P.M.	Datla mine, Jannardeo P.O., Central Provinces.	Amalgamated Coal- fields, Ltd.	Gendral Mehra, (m.), 20, Trammer.	Coal	While riding up an underground haulage incline at the end of the shift a trammer was seriously injured. Pneumonia set in and he died twenty days later. Deceased was not authorised to ride on tubs. Inspection and inquiry made.
158	25th January, 4 P.M.	Barkui mine, Parasia P. O., Central Provinces.	Pench Valley Coal Co., Ltd.	Jagardan Singh, (m.), 28, Coal-cutter.	Coal	While tramping a loaded tub along an underground tram- ming level deceased was run into by another loaded tub which he had left "unspragged" at the top of a slight gradient. He received injuries which were not considered serious but contracted Pneumonia from which he died nine days later. Inspection and inquiry made.

159	15th February, 2 A.M.	Sunkerpur mine, Ukhra P. O., Bengal.	Burn & Co., Ld.	Debi Pado Mukher- jee, (m.), 58, <i>Pit-sircar.</i>	Coal	While travelling down a jig-way, deceased was struck by a set of seven loaded tubs and killed instantly. Inspection and inquiry made.
160	20th February, 2 A.M.	East Rawanwara mine, Parasia P. O., Central Provinces.	Seth Hazarimal Bazaz.	Sanker Prasad Misra, (m.), 20, <i>Tub-checker.</i>	Coal	While travelling up a haulage incline deceased was fatally injured by being struck by two full tubs, which ran wild through the breaking of a coupling. If the drag had been used this accident would not have occurred. Inspection and inquiry made.
161	5th April, 12 mid-day.	Malkera mine, Katrasgarh P. O., Bihar and Orissa.	Tata Iron & Steel Co., Ld.	Bideshi Teli, (m.), 25, Sulaman, (m.), 39, Sitaram Gope, (m.), 25, <i>Labourers.</i>	Coal	While one empty and two loaded tubs were being drawn up a haulage road rising at 1 in 5, the rope broke, and the tubs ran amain, a distance of 500 feet down the road. The deceased, who were standing near the bottom of the road, were killed on the spot. Inspection and inquiry made.
162	23rd April, 2 P.M.	Ballihari mine, Kusunda P. O., Bihar and Orissa.	Ballihari Colliery Co., Ld.	Chito Hazam, (m.), 42, <i>Bailler.</i>	Coal	While a train of 16 empty tubs was being lowered down a haulage road, the dip of which varied from 1 in 10 to 1 in 5, the leading tub became uncoupled and ran wild. A miner, who happened to be on the road, was struck by the tub and so seriously injured that he afterwards died. Inspection and inquiry made.
163	24th April, 3-15 A.M.	Dharmaband mine, Katrasgarh P. O., Bihar and Orissa.	New Tetturya Coal Co., Ld.	Lattoo Rawani, (m.), 45, <i>Door attendant.</i>	Coal	While in the act of opening a ventilation door for the passage of tubs, a door attendant was crushed against the door by the leading tub of the set. He sustained an injury which proved fatal. Inspection and inquiry made.
164	6th May, 8 A.M.	Sevalia mine, Sevalia P. O., Bombay.	B, B. & C. I. Rly. Co., Ld.	Gazi Khan, (m.), 55, <i>Watchman.</i>	Stone	While a set of two loaded tubs was being hauled up a gradient of about 1 in 15, the rope became detached allowing the train to run wild. Deceased, who was riding behind the set without authority, attempted to jump clear but was struck by the rear tub. He succumbed to his injuries 22 days later. Inspection and inquiry made.
165	21st June, 12-10 A.M.	Bejdih mine, Suandachak P.O., Bengal.	Equitable Coal Co., Ld.	Lakhi Mejhian, (f.), 25, <i>Loader.</i>	Coal	A female coal loader who was not carrying a light was run over and killed instantly by four full tubs which were being lowered by hand down a gradient of 1 in 30. Inspection and inquiry made.
166	27th June, 5 P.M.	Makerwal mine, Trag P.O., Punjab.	C. B. Petman and L. Ishardas Kapur.	Haqdal Khan, (m.), 17, <i>Munshi.</i>	Coal	While a clerk employed on the surface was walking down a self acting surface incline 800 feet long and sloping at 1 in 8 he stepped off the empty line to let the empty tubs pass and was struck by the full tubs. He received injuries to which he succumbed two hours later. There were paths at either side of the incline. Inspection and inquiry made.

APPENDIX II—contd.

Fatal Accidents during the year 1935—contd.

Serial number	Date and hour of accident.	Name and situation of mine.	Name of owner.	Name, sex, age and occupation of persons killed.	Name of mineral worked.	Cause of accident and remarks.
HAULAGE—(22 deaths)—contd.						
167	9th July, 5 A.M.	Ekra Khas mine, Pansjora P.O., Bihar and Orissa.	Maharaja S. C. Nandi.	Taloo Chamar, (m.), 22, Trolleyman.	Coal	In order to re-rail an empty tub deceased pushed the following two empty tubs up the slope of a haulage road of rising 1 in 15. The tubs, which were not properly spragged, descended and ran into deceased while he was engaged in re-railing the third tub. He sustained injuries which proved fatal eighteen days later. Inspection and inquiry made.
168	16th July, 10 A.M.	Namdang mine, Margherita P.O., Assam.	Assam Railways and Trading Co., Ltd.	Miroo Pathan, (m.), 48, Trammer.	Coal	While re-railing a tub a trammer received slight injuries to a finger. He contracted tetanus from which he died two weeks later. Inspection and inquiry made.
169	6th August, 12 30 P.M.	Bhowra mine, Jouhgora P.O., Bihar and Orissa.	Eastern Coal Co., Ltd.	Sikhar Manjhi, (m.), 26, Trolleyman.	Coal	A trolleyman was riding on a tub up an incline when the tub was derailed and he was thrown to the ground. He sustained serious injuries from which he afterwards died. He was not authorised to ride on tubs. Inspection and inquiry made.
170	18th August, 12-11 A.M.	Dharmaband mine, Katraagarh P.O., Bihar and Orissa.	New Terturiya Coal Co., Ltd.	Ashu Meah, (m.), 20, Labourer.	Coal	Deceased left his working place and went to a haulage line where he lay down and fell asleep. A rake of four loaded tubs being hauled out-by-e ran over his leg and he sustained injuries from which he died eight days later. Inspection and inquiry made.
171	30th August, 5 P.M.	Dhori mine, Bokaro P.O., Bihar and Orissa.	Bokaro and Ramgur Ltd.	Bisnu Roy, (m.), 22, Loader.	Coal	While a set of 12 empty tubs was being lowered down a haulage plane dipping at 1 in 8, the leading three tubs became uncoupled and ran wild. A loader, who was running for safety, was struck by the runaway tubs and fatally injured. Inspection and inquiry made.
172	24th September, 4 P.M.	Chaudametta mine, Parasia P.O., Central Provinces.	Pench Valley Coal Co. Ltd.	Jian Goud, (m.), 20, Trammer.	Coal	A trammer placed his foot on an endless haulage rope while re-railing a loaded tub. The rope started at that moment and he was thrown off. The moving rope caused a lacerated wound on his right leg. He contracted tetanus and died 10 days later. Inspection and inquiry made.

173	25th September, 2-15 A.M.	Sitalpur mine, Dishergarh P. O., Bengal.	Bengal Coal Co., Ltd.	Khepa Manjhi, (m.), 28, <i>Underground Tramway.</i>	Coal	While a train of loaded tubs was being hauled up a gradient of 1 in 5½, the leading tub became derailed. An underground trammer, who was riding on the tub without authority, was run over and fatally injured. Inspection and inquiry made.
174	4th October, 5 A.M.	Pure Jharria mine, Jharria P. O., Bihar and Orissa.	Pure Jharria Colliery Co.	Narmada Shanker M. Pathak, (m.), 21, <i>Sirdar.</i>	Coal	While a set of five empty tubs was being lowered down a haulage plane dipping at 1 in 10 into a level, the first tub became derailed and crushed deceased against a pillar. He sustained serious injuries to which he succumbed four days later. Inspection and inquiry made.
175	14th December, 11 A.M.	Eklehra mine, Parasia P. O., Central Provinces.	Amalgamated Coal- fields, Ltd.	Assaroo Pardhan, (m.), 25, <i>Tramway.</i>	Coal	While a set of seven loaded tubs was being lowered down a slope of 1 in 30 under control of sprags, deceased came out of a manhole to push the set further out-by. His foot slipped and he was fatally struck by the leading tub of the set. Inspection and inquiry made.
SUNDRIES UNDERGROUND—(13 deaths).						
176	27th January, 3-15 A.M.	Burra Dhomo mine, Sitarampur P. O., Bengal.	Burra Dhomo Coal Co., Ltd.	Pairo Meah, (m.), 40, <i>Coal-cutter.</i>	Coal	A miner was standing on an iron chair 3 feet high pulling down roof stone 6' x 4' x 9' with his pick. When the roof stone was falling he jumped off the chair but the chair was struck and over-turned by the stone. The chair struck him on the back and he received fatal injuries. Inspection and inquiry made.
177	31st January, 9 A.M.	Sripur mine, Kalipahani P. O., Bengal.	Lodna Colliery Co. (1920), Ltd.	Fasham Roy, (m.), 38, <i>Loader.</i>	Coal	A loader was standing at the side of a belt conveyor with his right foot resting on the underframe. A large piece of coal travelling on the belt caught his leg and he received slight injuries. He developed tetanus after eleven days and pneumonia after sixteen days and died twenty-one days after the accident. Inspection and inquiry made.
178	10th February, 9-30 A.M.	Gna mine, Gua P. O., Bihar and Orissa.	Indian Iron & Steel Co., Ltd.	Jerka Orang, (m.), 45, <i>Labourer.</i>	Iron Ore	Deceased was one of a gang of labourers engaged in transporting a narrow gauge locomotive from a lower to a higher level in open cast workings, when a boulder 18' in diameter rolled down a slope and struck him on the leg. He sustained a serious injury and died as the result of it forty days afterwards. Inspection and inquiry made.
179	27th February, 11 A.M.	Bawdwin mine, Namtu P. O., Burma.	Burma Corpora- tion, Ltd.	Lu Moy Shein, (m.), 25, <i>Miner.</i>	Silver- Lead- zinc.	While assisting to move timber in a stop a miner fell astride a stringer, and sustained injuries to which he succumbed three days later. Inspection and inquiry made.

APPENDIX II—contd.
Fatal Accidents during the year 1935—contd.

Serial number.	Date and hour of accident.	Name and situation of mine.	Name of owner.	Name, sex, age and occupation of persons killed.	Name of mineral worked.	Cause of accident and remarks.
SUNDRIES UNDERGROUND(13 deaths)—contd.						
180	8th May, 8-30 A.M.	Yinnyein mine, Yinnyein, Burma.	Khan Bahadur Ibrahim.	Kamal, (m.), 28, Labourer.	Stone	Deceased was working on the face of a quarry suspended by a rope when the rope broke and he fell a distance of 25 feet. He was injured on the head. He was stated to have recovered and discharged from hospital two months later but another two months afterwards was reported to have died from septicaemia.
181	14th May, 7 P.M.	Sripur mine, Kalipahari P. O., Bengal.	Lodna Colliery Co. (1920), Ltd.	Mohendra Bauri, (m.), 27, Tramner.	Coal	Deceased assisted by another trammer was pushing a loaded tub round a curve on a slight slope. His right foot slipped and the tub moved back causing a lacerated wound on his left foot. He was suffering from malignant malaria and meningitis which were aggravated by the accident and which caused his death eleven days later. Inspection and inquiry made.
182	26th June, 1 A.M.	Loyabad mine, Banjora P. O., Bihar and Orissa.	Burrakur Coal Co., Ltd.	Bishunda yal Mahato, (m.), 36, Trolleyman.	Coal	While a trolleyman was operating a tippler underground, a bolt in the control lever broke, and he was thrown to the ground. He sustained injuries as the result of which he died one month later. Inspection and inquiry made.
183	9th July, 6 A.M.	Seebpore mine, Charaupur P. O., Bengal.	Katras-Jherria h Coal Co., Ltd.	Kali Turi, (m.), 38, Coal-cutter.	Coal	While dressing down roof coal from a ladder, deceased missed his mark with the crow-bar and overbalanced himself. He fell from a height of 10 feet, still retaining his hold on the crow-bar which injured his neck. He died of septic pneumonia ten days later. Inspection and inquiry made.
184	12th July, 6-30 P.M.	Bawdwin mine, Namtu P. O., Burma.	Burma Corporation, Ltd.	Cha Woo Liang, (m.), 41, Miner.	Silver- led-zinc.	While a gang of miners was dismantling a waste slide, the latter collapsed and some of the timber struck one of the miners fracturing his left leg. He died from septicaemia nearly four weeks later. Inspection and inquiry made.
185	16th July, 11 A.M.	South East Baraboni mine. Charaupur P. O., Bengal.	Maharaja S. C. Nandi.	Gopal Turi, (m.), 34, Timber mistry.	Coal	While props were being drawn in a depillaring area a big piece of coal rolled down from a goaf and dislodged a prop 14 feet long. A timber mistry was struck on the back and sustained serious injuries to which he succumbed seven hours later. Inspection and inquiry made.

186	19th July, 5 P.M.	Kalithan Gurgaon mine, Bhojndih P. O., Bihar and Orissa.	K. B. Seal & Sons.	Surajmani Mcjhain, (f.), 27. <i>Coal-carrier.</i>	Do.	While loading coal deceased apparently slipped and fell. She sustained serious injuries which proved fatal two hours later. Inspection and inquiry made.
187	17th September, 4 P.M.	Fyu mine, Fyu P. O., Burma.	Khan Bahadur Ibrahim.	Ko Yin, (m.), 34. <i>Driller.</i>	Stone	While descending the face of a stone quarry a driller lost his hold on the rope by which he was descending and fell to the base of the quarry—a distance of 20 feet. He was fatally injured. Inspection and inquiry made.
188	5th November, 2 P.M.	Mosaboni mine, Ghatsila P. O., Bihar.	The Indian Copper Corporation, Ltd.	Kharag Bahadur, (m.), 32. <i>Trammer.</i>	Copper	While the loading of a tub was proceeding from a chute, a piece of ore jumped off the tub and struck deceased causing a fracture of the sternum. Pneumonia supervened, and he died 16 weeks later. Inspection and inquiry made.

BY SURFACE MACHINERY—(2 deaths).

189	21st October, 10-15 P. M.	Kustore mine, Kusunda P. O., Bihar and Orissa.	Rancegunge Coal Association, Ltd.	Ramabatar Dhaikar, (m.), 35, <i>Winding engine Khalasia.</i>	Coal	While attending to a winding engine, deceased was struck by a rope capping which was released due to an overwind. He was instantly killed. Inspection and inquiry made.
190	1st November, 8 A. M.	Thingandou mine, Thingandou P. O., Burma.	Tavoy Tin Dredg- ing Corporation, Ltd.	Ram Singh, (m.), 30. <i>Jig Fitter.</i>	Tin	For some unexplained reason a fitter placed his hand behind the guard protecting two friction rollers driving the screens of a dredge. His hand was caught between the rollers causing severe injuries and he died from tetanus a week later. Inspection and inquiry made.

ON SURFACE RAILWAYS AND TRAMWAYS BELONGING TO THE MINE—(10 deaths).

191	22nd January, 11 P. M.	Ghorawari mine, Junnardeo P. O., Central P. ovinces.	Hirdagarh Collier- ies, Ltd.	Lathan Gond, (m.), 25, <i>Surface Trammer.</i>	Coal	A trammer who was lying at the side of a surface tramline was run into and killed by a locomotive. Inspection and inquiry made.
192	30th January, 1 P. M.	Noamundi mine, Noamundi P. O., Bihar and Orissa.	Tata Iron and Steel Co., Ltd.	Mangli Reja, (f.), 22, <i>Earth-carrier.</i>	Iron Ore	Deceased was crossing a metre gauge track on the surface when she was knocked down by a locomotive and killed instantly. Inspection and inquiry made.
193	31st March, 3-30 A. M.	Ghorawari mine, Junnardeo P. O., Central Provinces.	Hirdagarh Collier- ies, Ltd.	Babnial, (m.), 18. <i>Brakesman.</i>	Coal	In the course of a journey, the buffer of a locomotive broke off. The brake rod of a tub caught in the broken piece of the buffer and the force of the remaining tubs of the train caused the tub to overturn. The brakesman who was travelling on the tub was pinned underneath the tub and killed instantly. Inspection and inquiry made.
194	24th April, 11-35 A.M.	Tirodi South mine, Tirodi P. O., Central Provinces.	The Central Pro- vinces Manganese Or. Co., Ltd.	Dhanmanti Halba, (f.), 40, <i>Labourer.</i>	Manga- nese	While attempting to pass between a stationary and a moving tub near a crossing, deceased was caught between the two tubs and sustained internal injuries. She succumbed to her injuries six hours later. Inspection and inquiry made.

APPENDIX II—contd.

Fatal Accidents during the year 1935—contd.

Serial number.	Date and hour of accident.	Name and situation of mine.	Name of owner.	Name, sex, age and occupation of persons killed.	Name of mineral worked.	Cause of accident and remarks.
ON SURFACE RAILWAYS AND TRAMWAYS BELONGING TO THE MINE—(10 deaths)—contd.						
195	27th April, 5 P.M.	Baraduar mine, Baraduar P. O., Central Provinces,	Tata Iron and Steel Co., Ltd.	Chab Nath Dhubi, (m.), 37, <i>Labourer.</i>	Lime- stone.	In jumping off a tub-frame loaded with sleepers, deceased fell to the ground. A few sleepers dropped out and one of them struck him on the head so severely that he was killed almost instantly. Inspection and inquiry made.
196	29th June, 8 A.M.	Bhagaband mine, Jharia P. O., Bihar and Orissa.	Borrea Coal Co., Ltd.	Kanai Maunri, (m.), 36, <i>Coal-cutter.</i>	Coal.	While crossing a colliery siding on his way to work a miner was crushed between the buffers of two wagons and received injuries which proved fatal. Inspection and inquiry made.
197	6th July, 1 A.M.	Dishergarh mine, Dishergarh P. O., Bengal.	Equitable Coal Co., Ltd.	Moty Dom, (m.), 19, <i>Labourer.</i>	Coal.	In a rainy and stormy night deceased was hand-shunting an empty wagon to a screen. His foot slipped off the brake handle and fell on the rail. Both the feet were crushed beneath the wheels of the wagon. Gangrene set in and the right foot had to be amputated. He succumbed to his injuries five days later. Inspection and inquiry made.
198	15th September 2-45 A.M.	Serampore mine, Garih P. O., Bihar and Orissa.	Government of India, Railway Department (E. I. Railway).	Laloo Meah, (m.), 35, <i>Pinchman.</i>	Coal.	While lowering a wagon from beneath the shoot of a screening plant after its loading was completed deceased accidentally fell down and was run over. He was killed instantly. Inspection and inquiry made.
199	15th September 12 30 P.M.	Kuardih mine, Kalipahari P. O., Bengal.	Kuardih Coal Co., Ltd.	Mitu Mahato, (m.), 44, <i>Trammer.</i>	Coal.	While two trammers were pushing a loaded tub on a tramline, they were overtaken by another loaded tub which was also being pushed by two trammers with their heads and hands from behind. Deceased was struck by the tub and died from shock half an hour later. Inspection and inquiry made.

200	7th November, 4 P.M.	Loyabad mine, Bansjora P.O., Bihar and Orissa.	Burrakur Coal Co., Ltd.	Jhorn Pasi, (m.), 38, Loader.	Coal	Deceased was pushing a side tipping tub along a tramline on the surface when it was derailed and the shock caused the body of the tub to fall off one of its supports. His head was crushed between the flange of the tub body and the supporting bracket and he died three days later as the result of his injury. If the tub had been in good order the accident might not have occurred. Inspection and inquiry made.
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MISCELLANEOUS ON SURFACE—(2 deaths).

201	9th June, about 6 P.M.	Anzarpathra mine, Sijua P.O., Bihar and Orissa.	Union Coal Co., Ltd.	Maklas Rahman, (m.), 45, Fireman Tindal.	Coal	Deceased attempted to remove the manhole cover in a Lancashire boiler before the steam pressure in the latter had fallen to zero and was scalded by an outrush of steam. He died eleven days later as the result of his injuries. Inspection and inquiry made.
202	15th June, 3 P.M.	Widnes mine, Tavoy P.O., Burma.	High Speed Steel Alloys Mining Co., Ltd.	Bhalabhadra, (m.), 22, Tributor.	Wolfram	In order to facilitate the cutting of a sluicing channel a tree was being cut down, and when it had been sawn through about $\frac{3}{4}$ of its diameter, a sudden gust of wind snapped it off. The butt end struck one of the tributors who was engaged on the work, and caused injuries which did not appear to be serious, but he died 8 days later in hospital from Pneumonia. Inspection and inquiry made.

APPENDIX II—contd.

Fatal Accidents during the year 1935—contd.

Serial number.	Date and hour of accident.	Name and situation of mine.	Name of owner.	Name, sex, age and occupation of persons killed.	Name of mineral worked.	Reason for exclusion.	Cause of accident and remarks.
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FATAL ACCIDENTS NOT INCLUDED IN THE STATISTICS—(20 deaths).

1	12th February, 3-30 P.M.	Hinduchang mine, Tavoy P.O., Burma.	Tavoy Tin Dredging Co., Ltd.	Jawliya, (m.), 19, Labourer.	Tin	Not a mining accident.	While attempting to swim ashore from a dredge a labourer was drowned in about 10 feet of water. Inspection and inquiry made.
2	20th February, 6-45 A.M.	Kankane mine, Bansjora P.O., Bihar and Orissa.	Eastern Coal Co., Ltd.	Bhukul Turi, (m.), 26, Coal-carrier.	Coal	Not a mining accident.	Deceased became ill while at work underground and died as the result of heart failure shortly after reaching the surface. Inspection and inquiry made.
3	22nd February, 10 A.M.	South Tisra mine, Jharra P.O., Bihar and Orissa.	South Tisra Colliery Co., Ltd.	Makhan Singh, (m.), 50.	Coal	Not a mining accident.	Deceased was assisting to transport a crab-winch on a lorry, when the lorry overturned. He sustained serious injuries to which he succumbed two days later. Inspection and inquiry made.
4	5th May, 1 P.M.	Ekra Khas mine, Bansjora P.O., Bihar and Orissa.	Maharaja S. C. Nandi.	Bhutki Chamarin, (f.), 15.	Coal	Not employed.	Deceased was drowned while bathing in an old quarry which is regularly used for bathing purposes and contained water about 20 feet deep. Inspection and inquiry made.
5	6th May, 8 A.M.	Kuardih mine, Kalipahari P.O., Bengal.	Kuardih Coal Co., Ltd.	Charu Bala Dassi, (f.), 40.	Do.	Not a mining accident.	It is presumed that a woman of unsound mind jumped down a shaft 208 feet deep, and was killed. The shaft was properly fenced at the surface. Inspection and inquiry made.
6	17th May, 8-45 A.M.	Jamuria mine, Charanpur P.O., Bengal.	Equitable Coal Co., Ltd.	Sukar Chamar, (m.), 28, Coal-cutter.	Do.	Do.	While a rake of wagons was being marshalled by a railway engine in a colliery siding deceased attempted to pass between the buffers of two wagons and was crushed to death. Inspection and inquiry made.
7	19th May, 12 noon.	Kurhurbaree mine, Giridhi P.O., Bihar and Orissa.	Government of India, Railway Department. (E. I. Railway).	Panoo Bhuiya, (m.), 48.	Do.	Do.	While in a drunken condition deceased came to drink water from an old quarry, which is used as a regular bathing tank, and was drowned. Inspection and inquiry made.

8	23rd June, 5 A. M.	Bhuggudih mine, Jharra P. O., Bihar and Orissa.	Bengal Nagpur Coal Co., Ld.	Ladhiram Gara- ria (m.), 40, Sirdar.	Do.	Do.	While engaged in this duties underground a sirdar died of heart failure. Inspection and inquiry made
9	29th June, 6-30 P. M.	Seebpur mine, Charanpur P. O., Bengal.	Katras Jherriah Coal Co., Ld	Karna Bahadur. (m.), 21.	Do.	Not em- ployed	Deceased went through a substantial fence to wash in an old quarry containing water 20 feet deep and was drowned. Inspection and inquiry made.
10	13th July, 7-15 A. M.	Bhurangya mine, Mohuda P. O., Bihar and Orissa.	Bhurangya Coal Co.	Benki Baurin. (f.), 4.	Coal	Do.	Deceased was run over and killed by a loaded tub which was being pushed on a surface tramline. Inspection and inquiry made.
11	17th July, 10-58 A. M.	Loyabad (Trans- mission Line), Banajora P. O., Bihar and Orissa.	Sijna (Jherriah) Electric Supply Co., Ld	Amir Bhagta, (m.), about 30, Coal-cutter (employed at Poot- kee colli- ery).	...	An Acci- dent under the Indian Electri- city Act.	The deceased person climbed a tower carrying electric transmission wires. He received an electric shock and caused a flash which burned him extensively. He fell to the ground and fractured the base of the skull. The system was 3 phase, 11,000 volts A. C., insulated neutral. Inspection and inquiry made.
12	26th July, 9-30 A. M.	Kodur mine, Chipurupal e P. O., Madras.	Vizianagram Min- ing Co., Ld.	Suramma, (f.), 28.	Manga- nese.	Not em- ployed.	Deceased was drowned while bathing in a old quarry contain- ing about 50 feet of water. Inspection and inquiry made.
13	12th Septem- ber, 4 P. M.	Barkui mine, Parasia, Central Provin- ces.	Pench Valley Coal Co., Ld	Surjoo Passai, (m.), 50, Coal-cutter.	Coal	Do.	Deceased trespassed on a colliery and was digging coal from the outcrop of a seam when a fall of stone occurred which killed him.
14	19th Septem- ber, 12 30 P. M.	Tiera mine, Jharra P. O., Bihar and Orissa.	Amarsinh Gowamal and Manji Gowa- mal.	Krieto Mochi, (m.), 50.	Do.	Do.	Deceased was found run over by two loaded wagons when the wagons were being moved in the colliery siding. Inspection and inquiry made.
15	27th Septem- ber, 2-30 P. M.	Damra mine, Kalipahari P. O., Bengal.	Kalapahari Coal Co., Ld.	Dhanu Singh Kamar, (m.), 6.	Do	Do.	Three children about 6 years old went to play at the side of a water-logged old incline and one of them fell into water about 20 feet deep and was drowned. The incline was securely fenced with a fence of a permanent character. Inspection and inquiry made.
16	14th October, 5 P. M.	Sodepur (Nos. 9 & Pits) mine, Sundarchak P. O., Bengal.	Bengal Coal Co., Ld.	Chhoto Narain Hari, (m.), 22, Coal-cutter.	Do.	Not a mining accident	While crossing a colliery siding a miner was run over and killed instantly. Inspection and inquiry made.

APPENDIX II—contd.

Fatal Accidents during the year 1935—contd.

Serial Number.	Date and hour of accident.	Name and situation of mine.	Name of owner.	Name, sex, age and occupation of persons killed.	Name of mineral worked.	Reason for exclusion.	Cause of accident and remarks.
FATAL ACCIDENTS NOT INCLUDED IN THE STATISTICS—(20 deaths)—contd.							
17	31st October, 9-30 A.M.	Chanch mine, Chirkunda P. O., Bihar and Orissa.	Bengal Coal Co., Ltd.	Bhadi Baurin, (f.), 14.	Coal	Not employed.	Deceased entered a place in the outcrop of a seam from which coal had been extracted and part of the overburden, fell on her. Life was extinct when her body was recovered. Inspection and inquiry made.
18	16th November, 8 A.M.	Kanbank mine, Kanbank, Burma.	Kanbank mines, Ltd.	Mg Tha Pe, (m.), 45, (Not employed).	...	Do.	Deceased was killed by a fall of side in an open-cast working.
19	16th November, 8-30 A.M.	Barmondia mine, Sitarampur P. O., Bengal.	New Beerbhoom Coal Co., Ltd.	Suku Manjhi, (m.) 24, Coal-cutter.	Coal	Not a mining accident	Deceased was collecting rejected coal for his own use from underneath a standing wagon when the wagon started to move from being bumped by loose-shunted wagons. He received injuries which proved fatal fourteen days later. Inspection and inquiry made.
20	15th December, 4-30 P.M.	Peinnedaik mine, Thawutti, Burma.	Saw Lein Lee	Lou Yun, (m.), 35, Cooly.	Wolfram.	Do.	Deceased fell down a hill side, and received injuries from which he died.

APPENDIX II.**Table No. 2.**

Statement of fatal and serious accidents in and about Mines regulated by the Indian Mines Act, during the year 1935.

Table

Statement of fatal and serious accidents in and about Mines

Province.	District and Mineral field.	FATAL.							
		Number of separate fatal accidents.	Number of deaths.						Total.
			Under-ground.		Open workings.		Surface.		
			Males.	Females.	Males.	Females.	Males.	Females.	
Assam	Lakhimpur—M a k u m coalfield.	3	3	...	...	...	...	...	CO 3
Bengal (and part of Bihar and Orissa).	Raniganj coalfield .	46	42	4	...	...	2	...	48
Bihar and Orissa	Jharia coalfield .	74	96	10	1	1	4	...	112
	Bokaro ..	3	3	...	1	...	...	...	4
	Karapura ..	1	1	...	...	...	...	...	1
	Giridih ..	6	58	9	...	...	1	..	68
	Hingir Rampur ..	...	...	...	..	...	...	...	...
Central Provinces	Chanda	2	2	...	...	...	...	...	2
	Chhindwara—P e n o h Valley coalfield.	18	18	...	...	...	2	...	20
Punjab	Salt Range coalfield .	5	6	...	...	...	..	...	6
Total (Coal) .		158	229	23	2	1	9	...	264

DIX II.

No. 2.

regulated by the Indian Mines Act, during the year 1935.

ACCIDENTS.				SERIOUS ACCIDENTS.											
Death rate per 1,000 persons employed.				Number of separate serious accidents.	Number of persons seriously injured.							Serious injury rate per 1,000 persons employed.			
Underground.	Open workings.	Surface.	Underground, Open workings and Surface.		Underground.		Open workings.		Surface.		Total.	Underground.	Open workings.	Surface.	Underground, Open workings and Surface.
					Males.	Females.	Males.	Females.	Males.	Females.					
AL															
2.65	...	...	1.97	90	79	..	..	..	11	1	91	69.66	...	30.77	69.71
1.16	...	0.13	0.66	182	141	14	...	...	29	3	187	3.69	...	2.08	3.36
2.40	1.54	0.19	1.67	210	171	12	...	1	27	3	214	4.14	0.77	1.40	3.19
1.24	0.20	...	0.43	34	13	1	4	2	13	1	34	5.76	1.20	7.06	3.02
1.12	...	...	0.40	8	6	2	1	...	...	2	11	8.96	1.06	2.93	4.56
11.56	...	0.81	9.46	17	13	2	...	...	1	1	17	2.69	...	1.61	2.37
...	...	...	...	1	1	...	...	...	...	...	1	7.25	...	...	5.26
0.82	...	...	0.62	8	6	...	...	...	2	...	8	2.47	...	2.99	2.50
2.68	...	0.68	2.04	49	36	3	...	...	10	2	51	5.81	...	4.06	5.19
4.88	...	...	3.22	14	11	...	...	...	3	...	14	8.96	...	4.84	7.52
2.39	0.37	1.96	1.66	613	477	34	5	3	96	13	628	4.65	1.00	2.38	3.94

Table

Statement of fatal and serious accidents in and about Mines

Province.	District and Mineral field.	FATAL							
		Number of separate fatal accidents.	Number of deaths.						Total.
			Under-ground.		Open workings.		Surface.		
			Males.	Females.	Males.	Females.	Males.	Females.	
IRON									
Bihar and Orissa . . .	Singbhum	4	...	...	3	...	...	1	4
MANGA									
Bihar and Orissa . . .	Singbhum	1	...	...	...	...	1	...	1
Bombay	Panch Mahals . . . .	...	...	...	...	...	...	...	...
Central Provinces	Belaghat	1	...	...	...	...	...	1	1
	Bhadsara . . . . .	...	...	...	...	...	...	...	...
	Nagpur . . . . .	...	...	...	...	...	...	...	...
	Total (Mangar esse)	2	...	...	...	...	1	1	2
LEAD									
Burma	Northern Shan States	2	2	...	...	...	...	...	2
TIN AND									
Barma	Mergui	1	...	...	1	...	...	...	1
	Tavoy	14	4	...	9	...	2	...	15
	Total (Tin and Wolfram)	15	4	...	10	...	2	...	16
CHROMITE									
Bihar and Orissa . . .	Singhbhum	2	...	...	2	...	...	...	2

DIX II—*contd.*No. 2—*contd.*regulated by the Indian Mines Act, during the year 1935—*contd.*

ACCIDENTS.				SERIOUS ACCIDENTS.											
Death rate per 1,000 persons employed.				Number of separate serious accidents.	Number of persons seriously injured.							Serious injury rate per 1,000 persons employed.			
Underground.	Open workings.	Surface.	Underground, Open workings and Surface.		Underground.		Open workings.		Surface.		Total.	Underground.	Open workings.	Surface.	Underground, Open workings and Surface.
					Males.	Females.	Males.	Females.	Males.	Females.					
ORE															
...	0.54	0.49	0.53	3	..	..	1	..	2	..	3	..	0.18	0.99	0.40
NESE															
...	...	6.37	1.98	1	...	...	...	...	...	1	1	...	...	6.37	1.98
...	...	...	...	1	...	...	1	..	..	...	1	...	6.13	...	4.08
...	...	0.94	0.17	2	...	...	1	...	1	...	2	...	0.24	0.94	0.35
...	...	...	...	10	...	...	1	3	5	...	10	...	2.31	15.75	4.74
...	...	...	...	1	...	...	...	...	...	1	1	...	...	2.64	0.48
...	...	0.94	0.17	15	...	..	3	3	6	3	15	...	0.67	4.21	1.29
ORE															
0.65	...	...	0.56	105	92	..	...	...	13	...	105	30.06	...	28.45	29.52
WOLFRAM															
...	0.20	...	0.19	...	...	..	...	...	...	..	...	...	...	...	...
1.58	1.15	2.70	1.35	20	5	...	11	1	6	...	23	1.98	1.53	8.09	2.07
1.50	0.73	1.40	0.90	20	5	...	11	1	6	..	23	1.88	0.88	4.21	1.29
ORE															
...	1.48	...	1.35	1	..	...	2	...	...	..	2	...	1.48	...	1.35

Statement of fatal and serious accidents in and about Mines

Province.	District and Mineral field.	Number of separate fatal accidents.	FATAL								
			Number of deaths.								
			Under-ground.		Open workings.		Surface.		Total.		
			Males.	Females.	Males.	Females.	Males.	Females.			
Bihar and Orissa . . .	Singhbhum	1	1	..	..	..	..	..	..	1	COPPER
Bihar and Orissa . . .	Gaya . . . . .	..	..	..	..	..	..	..	..	..	MI
	Hazaribagh	2	..	1	2	..	..	..	..	3	
Madras	Nellore	1	..	..	1	..	..	..	..	1	
	Total (Mica)	3	..	1	3	..	..	..	..	4	
Punjab	Jhelum . . . . .	..	..	..	..	..	..	..	..	..	SA
	Shahpur . . . . .	..	..	..	..	..	..	..	..	..
	Total (Salt) . . . . .	..	..	..	..	..	..	..	..	..
Madras	Salem . . . . .	..	..	..	..	..	..	..	..	..	MAGN
Bihar and Orissa . . .	Monghyr	1	..	..	1	..	..	..	..	1	SLA

DIX II—contd.

No. 2—contd.

regulated by the Indian Mines Act, during the year 1935—contd.

ACCIDENTS.					SERIOUS ACCIDENTS.										
Death rate per 1,000 persons employed.				Number of separate serious accidents.	Number of persons seriously injured.							Serious injury rate per 1,000 persons employed.			
Underground.	Open workings.	Surface.	Underground, Open workings and Surface.		Underground.		Open workings.		Surface.		Total.	Underground.	Open workings.	Surface.	Underground, Open workings and Surface.
					Males.	Females.	Males.	Females.	Males.	Females.					
STONE															
..	1·31	...	0·99	4	...	..	...	1	2	1	4	...	0·65	6·01	1·97
...	14·71	...	14·71	...	...	...	...	...	...	...	...	...	...	...	...
...	...	8·00	1·75	...	...	...	...	...	...	...	...	...	...	...	...
...	0·79	...	0·72	7	...	...	2	1	4	...	7	...	0·79	11·87	1·69
...	...	...	...	10	...	...	3	...	7	...	10	...	17·75	67·96	36·76
...	0·96	0·86	0·95	21	...	...	5	2	13	1	21	...	1·13	12·04	2·84
NE															
...	2·68	...	1·21	2	...	...	1	...	1	...	2	...	0·67	0·55	0·00
...	5·95	...	5·95	1	...	...	2	...	...	...	2	...	11·90	...	11·90
...	100·00	...	11·24	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	1	...	...	...	...	1	...	1	...	...	200·00	2·01

Table

Statement of fatal and serious accidents in and about Mines

Province.	District and Mineral field.	Number of separate fatal accidents.	Number of deaths.						Total.
			Under-ground.		Open workings.		Surface.		
			Males.	Females.	Males.	Females.	Males.	Females.	
Burma	Lower Chindwin	1	...	...	1	...	...	...	1
	Tha-ton	1	...	...	1	...	...	...	1
	Toungoo	1	...	...	1	...	...	...	1
Madras	Guntur . . . . .	..	...	...	...	...	...	...	...
	Total (Stone)	9	...	...	9	...	...	...	9
Central Provinces	Jubbulpore . . . . .	...	...	...	...	...	...	...	...
	Grand Total (All minerals).	202	236	24	35	2	13	2	312

STO

FIRE

DIX II—*contd.*No. 2—*concl.*regulated by the Indian Mines Act, during the year 1935—*concl.*

ACCIDENTS.				SERIOUS ACCIDENTS.												
Death rate per 1,000 persons employed.				Number of separate serious accidents.	Number of persons seriously injured.								Serious injury rate per 1,000 persons employed.			
Underground.	Open workings.	Surface.	Underground, Open workings and Surface.		Underground.		Open workings.		Surface.		Total.	Underground.	Open workings.	Surface.	Underground, Open workings and Surface.	
					Males.	Females.	Males.	Females.	Males.	Females.						
NE—<i>contd.</i>																
..	4.74	..	4.48	..	..	..	..	..	..	..	..	..	..	..	..
..	0.63	..	0.52	13	..	..	5	..	5	..	13	3.06	14.01	6.70	..
..	9.70	..	9.70	..	..	..	..	..	..	..	..	..	..	..	..
..	..	..	..	1	..	..	1	..	..	..	1	5.78	..	4.93	..
..	1.03	..	0.73	18	..	..	12	..	7	..	19	1.38	1.95	1.55	..
CLAY.																
..	..	..	..	1	..	..	..	..	1	..	1	..	12.05	2.26	..
2.01	0.62	0.23	1.23	842	611	37	43	10	151	17	869	5.01	0.89	2.60	3.42	

APPENDIX II—*concl.*

Table No. 3.

Statement of fatal accidents in Mines regulated by the Indian Mines Act, during the year 1935, classified according to cause of accident.

Mineral worked.	Number of separate fatal accidents.	Number of persons killed.											Death rate per 1,000 persons employed.				
		Explosions and ignitions of fire-damp and coal dust.	Falls of roof.	Falls of side.	In shafts.	Suffocation by gases.	By explosives.	Irruptions of water.	Haulage.	Underground machinery.	Miscellaneous underground.	Surface.	Total deaths.	Underground.	Open workings.	Surface.	Open workings and Surface.
Coal . . .	168	83	75	43	9	4	2	11	21	...	7	9	254	239	0.37	1.96	1.66
Iron Ore . . .	4	...	...	2	...	...	...	...	...	...	1	1	4	...	0.54	0.49	0.53
Manganese Ore	2	...	...	...	...	...	1	...	...	...	...	1	2	...	...	0.94	0.17
Lead Silver . . .	2	...	...	...	...	...	...	...	...	...	2	...	2	0.65	...	...	0.56
Tin and Wolfram Ore.	15	...	1	11	1	...	1	...	...	...	...	2	16	1.50	0.73	1.40	0.90
Chromite Ore . . .	2	...	...	1	...	...	1	...	...	...	...	...	2	...	1.48	...	1.35
Copper Ore . . .	1	...	...	...	...	...	...	...	...	...	1	...	1	0.62	...	...	0.36
Mica . . .	3	...	...	3	1	...	...	...	...	...	...	...	4	0.07	0.86	...	0.17
Slate . . .	1	...	...	1	...	...	...	...	...	...	...	...	1	...	1.31	...	0.99
Limestone . . .	5	...	...	5	...	...	1	...	...	...	...	1	7	...	0.96	0.86	0.95
Stone . . .	9	...	...	5	...	...	1	...	1	...	2	...	9	...	1.03	...	0.73
Total 1935 . . .	202	83	76	71	11	4	7	11	22	...	13	14	312	2.01	0.62	0.23	1.23
Total of preceding year	177	...	73	60	4	-	16	...	20	1	14	21	209	1.28	0.83	0.39	0.91
Difference . . .	+25	+83	+3	+11	+7	+4	-9	+11	+2	-1	-1	-7	+103	+0.73	-0.21	-0.16	+0.32

APPENDIX III.

Statement of prosecutions under the Indian Mines Act, and Indian Penal Code, during the year 1935.

Province.	District.	Number of prosecutions.	Number of persons prosecuted.	Number of persons convicted.	Number of Regulations, Bye-laws and Rules and Sections of the Act contravened.	REMARKS.
Assam	Lakhimpur	1	3	2	Bye-law 8 made under Section 32 of the Indian Mines Act, 1923.	
	Bardwan	1	1	1	Section 176 of the Indian Penal Code.	
	Do.	2	6	5	Regulation 4(b) of the Regulations made under Notification No. M-1055, dated 7th March 1929 made under Section 29 (J) of the Indian Mines Act, 1923. Rule 9 of the Bengal Government Rules made under Section 30 of the Indian Mines Act, 1923, and Regulation 149 of the Indian Coal Mines Regulations, 1926.	One of the accused was acquitted.
Bengal	Do.	1	3	3	Regulation 4 (b) of the Regulations made under Notification No. M-1055, dated 7th March 1929 made under Section 29 (J) of the Indian Mines Act, and Rule 9 of the Bengal Government Rules made under Section 30 of the Indian Mines Act, 1923.	
	Do.	1	2	1	Regulations 121 and 139 of the Indian Coal Mines Regulations, 1926.	One of the accused was acquitted.
	Do.	1	1	1	Regulation 137 (2) of the Indian Coal Mines Regulations, 1926, read with Rule 18 of the Bengal Government Rules made under Section 30 of the Indian Mines Act, 1923.	
	Do.	1	1	1	Regulations 53(1), 53(c) and 137 of the Indian Coal Mines Regulations, 1926.	
	Do.	1	1	1	Regulations 53(1), 53(c) and 137 of the Indian Coal Mines Regulations, 1926.	

APPENDIX III—*contd.*

Statement of prosecutions under the Indian Mines Act, and Indian Penal Code during the year 1935—*contd.*

Province.	District.	Number of prosecutions.	Number of persons prosecuted.	Number of persons convicted.	Number of Regulations, Bye-laws and Rules and Sections of the Act contravened.	REMARKS.
Bengal— <i>contd.</i>	Burdwan . . .	1	1	1	Regulation 137 of the Indian Coal Mines Regulations, 1926, and Rule 18 of the Bengal Government Rules made under Section 30 of the Indian Mines Act, 1923.	
	Do.	1	1	1	Regulations 57 and 141 of the Indian Coal Mines Regulations, 1926 and Bye-law 64 made under Section 32 of the Indian Mines Act, 1923.	
	Do.	1	1	1	Regulation 87 of the Indian Coal Mines Regulations, 1926.	
	Hazaribagh . . .	1	2	2	Regulations 38 and 43 of the Indian Metalliferous Mines Regulations, 1926, and Rule 9 read with Section 28 of the Indian Mines Act, 1923.	
	Do.	1	3	3	Regulations 23 (2), 42 and 46 of the Indian Metalliferous Mines Regulations, 1926.	
	Do.	1	1	1	Regulation 38 of the Indian Metalliferous Mines Regulations, 1926.	
	Do.	1	2	2	Regulation 13 of the Indian Metalliferous Mines Regulations, 1926, and Rule 9 of of the rules made by the Bihar and Orissa Government under Section 30 of the Indian Mines Act, 1923.	
Bihar and Orissa.	Do.	1	3	...	Regulation 13 of the Indian Metalliferous Mines Regulations, 1926, Regulation 4 (b) made under Notification No. M.-1055, dated 7th March 1929 made under Section 29 (J) of the Indian Mines Act, 1923, and Rule 9 of the rules made by the Bihar and Orissa Government under Section 30 of the Indian Mines Act, 1923.	The case has not yet been disposed of.

APPENDIX III—*contd.*

Statement of prosecutions under the Indian Mines Act, and Indian Penal Code, during the year 1935—*contd.*

Province.	District.	Number of prosecutions.	Number of persons prosecuted.	Number of persons convicted.	Number of Regulations, Bye-laws and Rules and Sections of the Act contravened.	REMARKS.
Bihar and Orissa— <i>contd.</i>	Hazaribagh	1	2	9	Regulations 24(3), 67 and 69(2) of the Indian Coal Mines Regulations, 1926.	
	Manbhum . . .	1	2	1	Regulations 70(5) of the Indian Coal Mines Regulations, 1926.	One of the accused could not be traced.
	Do.	1	4	4	Regulation 15(4) of the Indian Coal Mines Regulations, 1926, Rule 9 of the rules made by the Bihar and Orissa Government under Section 30 of the Indian Mines Act, 1923, and Regulation 4 (b) made under Notification No. M-1055, dated 7th March 1929 made under Section 29(J) of the Indian Mines Act, 1923.	
	Do.	1	2	...	Regulation 146 of the Indian Coal Mines Regulations, 1926.	Both the accused were acquitted.
	Do.	1	2	2	Regulation 15 (2) and 15 (4) of the Indian Coal Mines Regulations, 1926, and Bye-law 36 made under Section 32 of the Indian Mines Act, 1923.	
	Do.	1	1	1	Regulations 3(4) of the Indian Coal Mines Regulations, 1926.	
	Do.	1	1	1	Regulations 17 and 18 of the Indian Coal Mines Regulations, 1926.	
	Do.	1	2	2	Regulation 67 of the Indian Coal Mines Regulations, 1926 and Bye-law 42 made under Section 32 of the Indian Mines Act, 1923.	

APPENDIX III—contd.

Statement of prosecutions under the Indian Mines Act, and Indian Penal Code, during the year 1955—contd.

Province.	District.	Number of prosecutions.	Number of persons prosecuted.	Number of persons convicted.	Number of Regulations, Bye-laws and Rules and Sections of the Act contravened.	REMARKS.
Bihar and Orissa— concd.	Manbhum	1	1	1	Section 35, sub-sections (a), (b) and (c) of the Indian Mines Act, 1923.	
	Do.	2	5	5	Regulation 4(b) made under Notification No. M.-1055, dated 7th March, 1929 made under Section 29(J) of the Indian Mines Act, 1923, Rule 9 of the rules made by the Bihar and Orissa Government under Section 30 of the Indian Mines Act, 1923 and Regulation 149 of the Indian Coal Mines Regulations, 1926.	
	Do.	1	2	2	Regulation 76 of the Indian Coal Mines Regulations, 1926.	
	Do.	1	4	2	Regulations 88 and 146 of the Indian Coal Mines Regulations, 1926, and Bye-laws 59, 60 and 61 read with Regulation 146.	Three of the accused preferred an appeal and two were acquitted.
	Do.	1	1	1	Regulation 3(3) of the Indian Coal Mines Regulations, 1926.	
	Do.	1	1	1	Bye-law 9 made under Section 32 of the Indian Mines Act, 1923.	
	Shahabad	1	1	...	Regulation 3(2) of the Indian Metalliferous Mines Regulations, 1926.	The case was withdrawn.
	Santbal Parganas	1	4	...	Regulation 38 of the Indian Metalliferous Mines Regulations, 1926	The case was withdrawn.
	Do.	1	2	2	Regulations 38 and 43 of the Indian Metalliferous Mines Regulations, 1926.	
	Bombay	Bombay	3	3	3	Regulation 3(1) of the Indian Metalliferous Mines Regulations, 1926.

APPENDIX III—*contd.*

Statement of prosecutions under the Indian Mines Act, and Indian Penal Code, during the year 1935—*contd.*

Province.	District.	Number of prosecutions.	Number of persons prosecuted.	Number of persons convicted.	Number of Regulations, Bye-laws and Rules and Sections of the Act contravened.	REMARKS.
Burma . . .	Mergui . . .	2	3	2	Regulation 20 of the Indian Metalliferous Mines Regulations, 1926 and Section 33 of the Indian Mines Act, 1923, read with Rules 19 and 19A of the Burma Government Rules made under Section 30 of the Indian Mines Act, 1923.	Case against one of the accused was dropped.
	Do. . . .	1	2	2	Regulation 20 of the Indian Metalliferous Mines Regulations, 1926, and Section 33 of the Indian Mines Act, 1923, read with Rules 19 and 19A and Rule 9 of the Burma Government Rules made under Section 30 of the Indian Mines Act, 1923.	
	Do. . . .	1	2	1	Regulation 8 of the Indian Metalliferous Mines Regulations, 1926, Section 33 of the Indian Mines Act, 1923, read with Rules 19 and 19A of the Burma Government Rules made under Section 30 of the Indian Mines Act, 1923, and Regulation 20 of the Indian Metalliferous Mines Regulations, 1926.	Case against one of the accused was withdrawn.
	Do. . . .	1	1	1	Regulation 7 of the Indian Metalliferous Mines Regulations, 1926, Rule 9 of the Burma Government Rules made under Section 30 of the Indian Mines Act, 1923, and Section 33 of the Indian Mines Act, read with Rules 19 and 19A of the Burma Government Rules made under Section 30 of the Indian Mines Act, 1923.	

APPENDIX III—contd.

Statement of prosecutions under the Indian Mines Act, and Indian Penal Code, during the year 1935—contd.

Province.	District.	Number of prosecutions.	Number of persons prosecuted.	Number of persons convicted.	Number of Regulations, Bye-laws and Rules and Sections of the Act contravened.	REMARKS.
Burma—contd.	Margui . . .	6	6	5	Regulation 3 (1) of the Indian Metalliferous Mines Regulations, 1926.	One of the accused was acquitted.
	Tavoy . . .	1	3	3	Regulations 38 of the Indian Metalliferous Mines Regulations, 1926, Section 8 of the Indian Mines Act, 1923 and Regulations 213) and 44 of the Indian Metalliferous Mines Regulations, 1926.	
	Bilaspur . . .	1	1	...	Regulations 89 and 91 of the Indian Metalliferous Mines Regulations, 1926.	The accused was acquitted.
	Chindwara . . .	1	2	2	Bye-law 85 made under Section 32 of the Indian Mines Act, 1923.	
Central Provinces.	Do.	4	6	6	Regulation 95 of the Indian Coal Mines Regulations, 1926.	
	Do.	1	1	1	Regulations 95 and 143 of the Indian Coal Mines Regulations, 1926.	
	Do.	1	3	3	Regulations 82 and 148 of the Indian Coal Mines Regulations, 1926.	
	Do.	1	1	1	Regulation 117 of the Indian Coal Mines Regulations, 1926.	
	Do.	1	1	1	Regulations 108 and 109 of the Indian Coal Mines Regulations, 1926.	
	Do.	1	1	1	Bye-laws 2 and 11 made under Section 32 of the Indian Mines Act, 1923.	
	Do.	1	1	1	Regulation 108 of the Indian Coal Mines Regulations, 1926.	

APPENDIX III—concl'd.

Statement of prosecutions under the Indian Mines Act, and Indian Penal Code, during the year 1935—concl'd.

Province.	District.	Number of prosecutions.	Number of persons prosecuted.	Number of persons convicted.	Number of Regulations, Bye-laws and Rules and Sections of the Act contravened.	REMARKS.
Central Provinces—concl'd.	Chindwara . . .	1	2	2	Regulations 111 and 143 of the Indian Coal Mines Regulations, 1923.	
	Do.	1	1	1	Regulations 146, 147 and 148 of the Indian Coal Mines Regulations, 1923.	
	Do.	1	1	1	Regulation 92 of the Indian Coal Mines Regulations, 1923 and Bye-law 89 made under Section 32 of the Indian Mines Act, 1923.	
Madras	Nellore	1	1	1	Regulations, 13, 38 and 91 of the Indian Metalliferous Mines Regulations, 1926.	
United Provinces.	Hamirpur	1	1	1	Regulations 20 and 42 of the Indian Metalliferous Mines Regulations, 1926.	
	TOTAL	66	110	91		

APPENDIX IV.

Miscellaneous.

Statement No. 1.

LIST OF INSPECTION CIRCLE.

No. 1 Circle.	No. 2 Circle.
1. All mines in Baluchistan.	1. All mines in Assam.
2. All mines in Bihar and Orissa except mines in the District of the Santhal Parganas and such mines in the District of Manbhum as lie east of a line drawn from mile 175 on the Bengal Nagpur Railway to mile 169 on the Grand Trunk Road and continued in a straight line across the District.	2. All mines in Bengal.
3. All mines in Delhi.	3. Such mines in Bihar and Orissa as lie in the District of the Santhal Parganas and in the District of Manbhum east of a line drawn from mile 175 on the Bengal Nagpur Railway to mile 169 on the Grand Trunk Road and continued in a straight line across the District.
4. All mines in the North-West Frontier Province.	4. All mines in Bombay.
5. All mines in the Punjab.	5. All mines in Burma.
6. All mines in Rajputana.	6. All mines in the Central Provinces.
7. All mines in the United Provinces.	7. All mines in Madras.

Statement No. 2.

Names of persons to whom first and second class coal mine managers' certificates of competency and surveyors' certificates of competency were granted during the year 1935.

Certificates granted to holders of British certificates of competency.

(a) FIRST CLASS.

Name.	Number of Indian certificate.	Date of Indian certificate.	Number of British certificate.	Date of British certificate.
Joshua, Walter John	370	17th January 1935	2611	29th January 1932.
Dobbs, Edmund	371	7th June 1935	2646	22nd July 1932.

APPENDIX IV—*contd.*Miscellaneous—*contd.*Statement No. 2—*contd.*

Names of persons to whom first and second class coal mine managers' certificates of competency and surveyors' certificates of competency were granted during the year 1935—*contd.*

Certificates granted to holders of British certificates of competency—*contd.*

(a) FIRST CLASS—*contd.*

Name.	Number of Indian certificate.	Date of Indian certificate.	Number of British certificate.	Date of British certificate.
Senior, Oscar Hammond	372	18th November 1935	2670	22nd July 1932.
Paterson, John Hunter	373	Ditto	2745	21st July 1933.
Sinha, Rameshwar Prosad	374	Ditto	2371	22nd July 1932.
Maltman, James	375	Ditto	2846	8th February 1935.
Colvin, William James	376	Ditto	2797	27th July 1934.
Bolton, Arnold	377	Ditto	2708	21st July 1933.

(b) SECOND CLASS.

Nil.

(c) SURVEYORS' CERTIFICATES.

Nil.

INDIAN CERTIFICATES.

(a) FIRST CLASS.

Name.	No. of certificate.	Date of certificate.	REMARKS.
Ohri, Banwari Lal	227	9th May 1935	
Dhown, Chaman Lal	228	Ditto.	

APPENDIX IV—*contd.*Miscellaneous—*contd.*Statement No. 2—*contd.*

Names of persons to whom first and second class coal mine managers' certificates of competency and surveyors' certificates of competency were granted during the year 1935—*contd.*

INDIAN CERTIFICATES—*contd.*(a) FIRST CLASS—*contd.*

Name.	No. of certificate.	Date of certificate.	REMARKS.
Bakshit, Sukumar	229	9th May 1935.	
Singh, Ramnaresh	230	Ditto.	
Cooper, Sydney Jukes	231	Ditto.	
Sen, Prafulla	232	Ditto.	
Mulay, Vishvanath Mohaniraj	233	Ditto.	
Boso, Jitendra Cumar	234	Ditto.	
Tewari, Ananga Mohan	235	Ditto.	
Banerjee, Mohima Ranjan	236	Ditto.	
Brahmachari, Sushil Kumar	237	Ditto.	
Badhwar, Inder Jit	238	Ditto.	
Jabbi, Gurbachan Singh	239	Ditto.	
Ghosh, Braja Kanta	240	Ditto.	
Bhattacharjee, Sudha Krishna	241	Ditto.	
Gandhi, Gopal Krishna	242	Ditto.	
Khanna, Lakh Raj	243	Ditto.	
Roy, Radha Benode	244	Ditto.	
Marwah, Bichittar Singh	245	Ditto.	
Sabhlok, Krishan Lal	246	Ditto.	

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APPENDIX IV—*contd.*Miscellaneous—*contd.*Statement No. 2—*concl.*

Names of persons to whom first and second class coal mine managers' certificates of competency and surveyors' certificates of competency were granted during the year 1935—*concl.*

INDIAN CERTIFICATES—*concl.*

(b) SECOND CLASS.

Name.	No. of certificate.	Date of certificate.	REMARKS.
Dhown, Chaman Lall	504	9th May 1935.	
Mulay, Vishvanath Mohaniraj	505	Ditto.	
Khanna, Lekh Baj	506	Ditto.	
Mathur, Kripa Sanker	507	Ditto.	
Yasin, Mohammed	508	Ditto.	
Prasad, Dharma Nath	509	Ditto.	
Das, Subodh Kumar	510	Ditto.	
Maciel, Sebastian	511	Ditto.	
Gulati, Raghunath Sahai	512	Ditto.	
Das, Narendra Chandra	513	Ditto.	
Sen, Sudhindra Nath	514	Ditto.	
Roy, Munish Chandra	515	Ditto.	

(c) SURVEYORS' CERTIFICATES.

Name.	No. of certificate.	Date of certificate.	REMARKS.
Chakraverty, Prabodh Chandra	82	13th February 1936.	
Mirza, Bashir Ahmed	83	Ditto.	
Ghatak, Shib Chandra	84	Ditto.	
Verma, Achyuta Nand	85	Ditto.	

APPENDIX IV—*contd.*Miscellaneous—*contd.*

Statement No. 3.

NOTIFICATION.

New Delhi, the 21st February 1935.

No. 1952T.—In exercise of the powers conferred by Section 147 of the Indian Railway Act, 1890 (IX of 1890), the Governor General in Council is pleased to exempt the following Railways from all the provisions of the said Act, namely:—

* * *
* * *

13. Generally, any sidings and lines in or adjacent to or belonging to a mine which come within the definition of "Mine" under the Indian Mines Act, 1923 (IV of 1923).

L. H. KIRKNESS,
Secretary, Railway Board.

Statement No. 4.

NOTIFICATION.

Rangoon, the 9th April 1935.

No. 82.—In exercise of the powers conferred by Section 30 of the Indian Mines Act, 1923, the Governor in Council is pleased to direct that the following further amendments shall be made in the Burma Mines Rules, published with General Department Notification No. 63, dated the 1st May 1926, namely:—

1. In Rule 2 the words "where the Chief Inspector so directs" shall be *deleted*.

2. For Rules 3, 4 and 5 the following rules shall be *substituted*:—

3. (1) If the Government of Burma so directs latrine and urinal accommodation shall be provided in the case of any mine or class of mines either on the surface only or both on the surface and in the underground workings of the mine, and, in the case of latrines, the accommodation shall be on the scale laid down in Rule 3 (2).

(2) The latrine accommodation provided for each sex shall be not less than as determined by the following scale in accordance with the number of persons of that sex employed on an average day in the busy season of the mine or quarry:—

<i>Persons employed.</i>	<i>Place(s).</i>
10 or less	1
11 to 25	2
26 to 50	3
51 to 75	4
75 to 100	5

For every 30 persons over 100, one extra place.

(3) Where dwelling places for the persons employed in the mine are provided by the owner and latrine and urinal accommodation in reasonable proximity to such dwelling places is not provided or where the latrine and urinal accommodation which has been provided is inadequate, the Inspector of Mines may direct that latrine and urinal accommodation in reasonable proximity to the dwelling places shall be provided in accordance with the scale laid down in Rule 3 (2).

4. Every latrine erected on the surface for the use of work-people shall be so screened and partitioned off as to secure privacy and if a latrine for the use of females adjoins a latrine for the use of males, the entrances shall be separate and at every such entrance a notice clearly indicating for which sex the latrine is intended, shall be provided.

APPENDIX IV—*contd.*Miscellaneous—*contd.*Statement No. 4—*contd.*

5. (i) All latrines and urinals in or about a mine shall be kept in a sanitary condition.
- (ii) Where bucket latrines and urinals are provided—
- (a) the buckets shall be cleaned and disinfected daily ; and
- (b) the *excreta* collected in buckets shall be buried in the ground or disposed of in such other manner as may be approved by an Inspector of Mines ; and
- (iii) Trenches provided for use as latrines or used for the disposal of *excreta* from bucket latrines shall be kept in a sanitary condition and the *excreta* deposited in a trench on any day shall be covered over on the day it is deposited with a thin layer of earth.

By order.

SAW HLA PRU,
Secretary to the Government of Burma,
Judicial Dept.

No. 184V35.

Rangoon, the 24th April 1935.

A copy, with four spare copies, is forwarded to the Financial Commissioner, Burma, for information.

A copy, with a spare copy, is forwarded to all Commissioners of Divisions, all District Magistrates and Superintendent, Northern Shan States, for information.

A copy, with two spare copies, is forwarded to the Chief Inspector of Mines in India, Dhanbad, for information, with reference to his letter No. 9575-G, dated the 13th September 1934.

A copy, with twenty spare copies, is forwarded to the Director of Public Health, Burma, for information.

A copy, with twenty spare copies, is forwarded to the Labour Commissioner, Burma for information.

By order,

AUNG MYINT,
Under Secy. to the Govt. of Burma.

Statement No. 5.

NOTIFICATION.

The 11th May 1935.

No. 18452.—In exercise of the powers under Rule 3 of the rules issued under Punjab Government Notification No. 3224-D., dated the 14th July 1927, the Governor in Council is pleased to direct that in every mine where 25 or more persons are employed, latrine and urinal accommodation shall be provided on the surface, subject to the conditions :—

- (i) that there shall be one seat for every 25 persons or part thereof, and
- (ii) that the urinals and latrines shall be of the type approved by the local District Medical Officer of Health with due regard to the local conditions.

This order shall come into force within two months of the date of issue of the Notification.

F. C. BOURNE,
Secretary to Government, Punjab,
Electricity and Industries Department.

APPENDIX IV—*contd.*Miscellaneous—*contd.*

Statement No. 6.

NOTIFICATION.

Simla, the 1st October 1935.

No. M.-1051.—In exercise of the powers conferred by sub-section (1) of Section 46 of the Indian Mines Act, 1923 (IV of 1923), and by Section 18 of the Indian Mines (Amendment) Act, 1935 (V of 1935), and in supersession, with effect from the 1st October 1935, of the Notification of the Government of India in the Department of Industries and Labour No. M.-665, dated the 16th April 1930, and of all notifications amending the same, the Governor-General in Council is pleased to exempt the mines, groups of mines, classes of mines, parts of mines, and classes of persons specified in the first column of annexed Schedule from the operation of those provisions of the first-named Act as amended by the second-named Act which are specified in the corresponding entry in the second column thereof, subject to the conditions, if any, specified in the corresponding entry in the third column thereof.

SCHEDULE.

1 Mines and classes exempted.	2 Provisions from which exemption is granted.	3 Conditions attached to exemption.
<p>1. Mines of <i>kankar</i>, <i>murum</i>, laterite, gravel, sand, clay (not including kaolin, china clay or white clay), fire-clay, ochre, stone, earth, fuller's earth, barytes, bauxite, slate and lime-stone :</p> <p>Provided that this exemption shall not apply to:—</p> <p>(a) The mines specified in Appendix I to this Schedule.</p> <p>(b) Slate mines in the Province of the Punjab and in the Moughyr district of the Province of Bihar and Orissa.</p> <p>(c) Limestone mines in the districts of Shahabad and Jubbulpur.</p> <p>(d) Mines of soapstone or steatite.</p>	<p>All</p>	<p>(1) The owner, agent or manager of every mine so exempted, whether existing or new, shall forward to the Chief Inspector and the District Magistrate a report in the form contained in Appendix II to this Schedule as soon as</p> <p>(i) the depth of the mine measured from its highest to its lowest point reaches 20 feet; or</p> <p>(ii) the number of persons employed in the mine on any day is more than 50;</p> <p>and at such times thereafter as the District Magistrate may direct.</p> <p>(2) The owner, agent and manager shall permit the Chief Inspector or any person exercising the powers of Inspector to enter, inspect and examine any mine so exempted at any reasonable time.</p>

APPENDIX IV—*contd.*Miscellaneous—*contd.*Statement No. 6—*contd.*NOTIFICATION—*contd.*SCHEDULE—*contd.*

1 Mines and classes exempted.	2 Provisions from which exemption is granted.	3 Conditions attached to exemption.
<p>2. Borings and oil wells in the making or operation of which no person is employed beneath the superjacent ground; and hand-dug oil wells.</p> <p>3. Mines or part of mines in which excavation is being carried out for prospecting purposes only and not for the purpose of obtaining minerals for use or sale:</p> <p>Provided that—</p> <p>(i) not more than 20 persons are employed in or about such excavation;</p> <p>(ii) no part of the excavation extends beneath the superjacent ground; and</p> <p>(iii) the depth of the excavation measured from its highest to its lowest point nowhere exceeds 20 feet or, in the case of an excavation for coal, 50 feet.</p> <p>4. Iron-ore mines worked without mechanical power, the whole of the ore from which is supplied locally to village smelters and blacksmiths.</p> <p>5. The following mines in the Province of Bihar and Orissa, namely:—</p> <p>(i) The coke factory of the Barrakur Coal Company Ltd. at Loyabad in the Maubhum district.</p>	<p>All.</p> <p>All.</p> <p>All.</p> <p>All.</p>	

APPENDIX IV—*contd.*Miscellaneous—*contd.*Statement No. 6—*contd.*NOTIFICATION—*contd.*SCHEDULE—*contd.*

1 Mines and classes exempted.	2 Provisions from which exemption is granted.	3 Conditions attached to exemption.
<p>5. The following mines in the Province of Bihar and Orissa, namely:—</p> <p>(i) The coke factory of the Barari Coke Company, Ltd., at Kendwadih in the Manbhum district.</p> <p>(ii) The coke factory of the Eastern Coal Company, Ltd., at Bhowra in the Manbhum district.</p> <p>(iii) The coke factory of the Lodna Colliery Company, Ltd., at Lodna in the Manbhum district.</p> <p>(iv) The coke factory of the East Indian Railway at Giridih in the Hazaribagh district.</p> <p>(v) Open excavations for coal in the Rajmahal coalfields in the district of the Southal Parganas, provided that not more than 20 persons are employed in or about the mine at any one time.</p>	<p>All.</p> <p>All.</p> <p>All.</p> <p>All.</p> <p>All.</p>	
<p>6. The following mines in the Presidency of Bombay, namely:—</p> <p>Stone crushing plants forming part of the mines included in Appendix I situate in the Town and Island of Bombay and which twenty or more persons are employed or were employed on any day of the preceding twelve months in the crushing and sizing of stones</p>	<p>All.</p>	

APPENDIX IV—*contd.*Miscellaneous—*contd.*Statement No. 6—*contd.*NOTIFICATION—*contd.*SCHEDULE—*contd.*

1 Mines and classes exempted.	2 Provisions from which exemption is granted.	3 Conditions attached to exemption.
<p>7. The following mines in the Province of Burma, namely:—</p> <p>(i) Steatite mines in the Kyaukpyu, Chin Hills and Mibu districts, and native precious stone mines in the Katha district.</p> <p>(ii) Other precious stone mines in the Katha district.</p> <p>(iii) All mines in the Federated Shan States.</p> <p>(iv) The ore dressing plant of the Burma Corporation, Limited, at Namtu, Northern Shan States.</p>	<p>All</p> <p>The provisions contained in Sections 22A, 22B, 22C, 23, 23B and 28.</p> <p>All.</p>	
<p>8. The following mines in the Presidency or Madras, namely:—</p> <p>Stone mines in the Mangalgiiri sub-division of the Gunjur district specified in Appendix I.</p>	<p>The provisions contained in Section 28.</p>	
<p>9. The following mines in the North-West Frontier Province, namely:—</p> <p>(i) Salt mines in the Kohat district.</p> <p>(ii) Carbonaceous clay pits in the Hazara district.</p>	<p>All.</p> <p>All.</p>	

APPENDIX IV—*contd.*Miscellaneous—*contd.*Statement No. 6—*contd.*NOTIFICATION—*contd.*SCHEDULE—*contd.*

1 Mines and classes exempted	2 Provision from which exemption is granted.	3 Conditions attached to exemption.
10. Persons employed on the tribute system in tin and wolfram mines in the Province of Burma.	The provisions contained in Sections 22A, 22B, 22C, 23, 23B and 28.	
11. Persons employed in the loading of wagons, tubs or carts on the surface and cartmen on the surface.	The provisions contained in Sections 23B and 28 (3).	
12. Firemen, winding enginemen, pumpmen and horse-keepers.	The provisions of Section 22A.	
13. Convicts employed either in the Public Works Department mines or in mines belonging to the Jail Department, Burma, specified in Appendix I.	The provisions contained in Section 28.	

APPENDIX I.

[Clause (a) of proviso to entry 1 in first column of Schedule.]

No.	Name of mine.	Name of owner.	Situation.		
			Village.	Sub-Division.	District.
			(BENGAL) STONE MINES.		
1	Maharaja's stone	Maharaja of Kassimbazar.	Bahadurpur Chandaunagar. Lakshmanpur.	Rampurhat	Birbhum.
2	Gopalpur	S. G. Bose	Bajgaon	Do.	Do.

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APPENDIX IV—*contd.*Miscellaneous—*contd.*Statement No. 6—*contd.*APPENDIX I—*contd.*[Clause (a) of proviso to entry 1 in first column of Schedule]—*contd.*

No.	Name of mine.	Name of owner.	Situation.		
			Village.	Sub-division.	District.
CLAY MINE.					
1	Gopinathpur . . .	Nirod Baran Roy . . .	Durgapur . . .	Asansol . . .	Burdwan.
FIRECLAY MINES.					
1	Churulia	The Churulia Coal Co., Ltd.	Churulia	Asansol	Burdwan.
2	Danapahari	Danapahari Fireclay Concern.	Bonjamuri	Do.	Do.
(BIHAR AND ORISSA.)					
STONE MINES.					
1	Keudadih	Tata Iron and Steel Company, Ltd.	Galudih . . . . .	...	Singhbhum.
2	Bhairabpur No. 2. Quarry	A. N. Mukherjee	Bhairabpur	Jamshedpur	Do.
3	Bhairabpur	L. Hartley and Company.	Narsingarh	Do.	Do.
4	Pawrah Narsingarh	K. B. Dass	Do.	Do.	Do.
5	Dhaodandh	Government of Bihar and Orissa, P. W. Department, (Irrigation Branch).	Dhaodandh	Sasaram	Shahabad.
6	Barhaibagh	East Indian Railway	Barhaibagh	Do.	Do.
7	Tarachandi	Seth Isar Das	Tarachandi (Sikaria)	Do.	Do.
8	Ramsilla	G. W. Powell and A. Ghani.	Gaya	Gaya	Gaya.
9	Araji-khaprajola and Kolhajora.	Seth Lilaram	Araji Khaprajola and Kolhajora.	Pakur	Sonthal Pargana.

APPENDIX IV—*contd.*Miscellaneous—*contd.*Statement No. 6—*contd.*APPENDIX I—*contd.*[Clause (a) of proviso to entry 1 in first column of Schedule]—*contd.*

No.	Name of mine.	Name of owner.	Situation.		
			Village.	Sub-division.	District.
(BIHAR AND ORISSA)— <i>contd.</i>					
STONE MINES— <i>contd.</i>					
10	Baghajuli and Monjurecola.	J. N. Banerjee and Company.	Baghajuli . .	Pakur . .	Sonthal Parganas.
11	Baghajuli . .	Eastern Stone Company.	Do. . .	Do. . .	Do.
12	Baghajuli . .	K. D. Gupta . .	Do . . .	Do. . .	Do.
13	Baghajuli and Ghorapahari.	H. K. Mukherjee . .	Baghajuli and Ghorapahari.	Do. . .	Do.
14	Baghajuli . .	Pakurjam Stone Company.	Baghajuli . .	Do. . .	Do.
15	Baghajuli and Manjurecola.	Raghunir Prasad and Bros.	Baghajuli and Manjurecola	Do. . .	Do.
16	Baghajuli . .	Maharaja of Kassimbazar Stone Works.	Baghajuli . .	Do. . .	Do.
17	Baghajuli . .	A. Sarkar & Co. . .	Do. . .	Do. . .	Do.
18	Ghorapahari . .	All-India Stone Company.	Ghorapahari . .	Do. . .	Do.
19	Ghorapahari . .	Pakur Stone Supply Co.	Do. . .	Do. . .	Do.
20	Ghorapahari . .	Cauliffe & Martin . .	Do. . .	Do. . .	Do.
21	Baghajuli . .	Laljram Raghunandan Prasad.	Do. . .	Do. . .	Do.
22	Ghorapahari . .	Pakur Stone Co . .	Do . . .	Do. . .	Do.
23	Ghorapahari . .	Pakurjam Stone Co.	Do. . .	Do. . .	Do.
24	Ghorapahari . .	Raghunir Prasad & Bros.	Do. . .	Do. . .	Do.
25	Ghorapahari . .	Seth Teomll . .	Do. . .	Do. . .	Do.

APPENDIX IV—*contd.*Miscellaneous—*contd.*Statement No. 6—*contd.*APPENDIX I—*contd.*[Clause (a) of proviso to entry 1 in first column of Schedule]—*contd.*

No.	Name of mine.	Name of owner	Situation.		
			Village.	Sub-division.	District.
(BIHAR AND ORISSA)— <i>contd.</i>					
STONE MINES— <i>contd.</i>					
26	Jharnatola . . .	H. K. Mukherjee	Jharnatola . . .	Pakur . . .	Sonthal Parganas
27	Kolajora . . .	Do . . .	Kolajora . . .	Do . . .	Do . . .
28	Mahulan . . .	Kumar G. C. Pandey	Mahulan . . .	Do . . .	Do . . .
29	Mahadebpur . . .	H. K. Mukherjee . . .	Mahadebpur . . .	Do . . .	Do . . .
30	Malpahari . . .	B. N. Pal and M. N. Dey.	Malpahari . . .	Do . . .	Do . . .
31	Malpahari . . .	Behar Stone and Supply Company.	Do . . .	Do . . .	Do . . .
32	Malpahari . . .	Gyanendra Nath Bauerjee	Do . . .	Do . . .	Do . . .
33	Malpahari . . .	B. B. Chatterjee & Sons.	Do . . .	Do . . .	Do . . .
34	Malpahari . . .	Chatterjee Shaw & Co.	Do . . .	Do . . .	Do . . .
35	Malpahari . . .	K. C. Ghosh & Co . . .	Do . . .	Do . . .	Do . . .
36	Malpahari . . .	H. K. Mukherjee	Do . . .	Do . . .	Do . . .
37	Malpahari . . .	Netram Sagarmall . . .	Do . . .	Do . . .	Do . . .
38	Malpahari . . .	Pakur Stone Co. . .	Do . . .	Do . . .	Do . . .
39	Mungalpara . . .	Pakur Stone Co. . .	Mungalpara . . .	Do . . .	Do . . .
40	Manjurcola . . .	B. B. Chatterjee & Sons.	Manjurcola . . .	Do . . .	Do . . .
41	Manjurcola . . .	Chatterjee & Chakrabarty.	Do . . .	Do . . .	Do . . .
42	Manjurcola . . .	Netram Sagarmall . . .	Do . . .	Do . . .	Do . . .

APPENDIX IV—*contd.*Miscellaneous—*contd.*Statement No. 6—*contd.*APPENDIX I—*contd.*[Clause (a) of proviso to entry 1 in first column of Schedule]—*contd.*

No.	Name of mine.	Name of owner.	Situation.		
			Village .	Sub-division	District.
(BIHAR AND ORISSA)— <i>contd.</i>					
STONE MINES— <i>contd.</i>					
43	Baghajuli and Manjurecola.	Seth Khia Mall	Baghajuli Manjurecola.	Pakur	Southal Parganas.
44	Matiara	Netram Sagarmall	Mutiara	Do.	Do.
45	Murgadanga	Ramananda Baghnath Misir.	Murgadanga	Do.	Do
46	Pathrapara	H. K. Mukherjee	Pathrapara	Do.	Do.
47	Pipuljhuri	Pakur Stone Co.	Pipuljhuri	Do.	Do.
48	Pipuljhuri and Arajikhaprajola.	Kumar G. C. Paudey	Pipuljhuri and Arajikhaprajola	Do.	Do.
49	Ranicola	H. K. Mukherjee	Ranicola	Do.	Do.
50	Sonajuri	H. K. Mukherjee	Sonajuri	Do.	Do.
51	Bankudih	Sha Muhammad Biewas.	Bakudih	Rajmahal	Do.
52	Bankudih Bonapara, Chota	Gurudeo Singh	Do.	Do.	Do.
53	Bindubasini hill	Calcutta Chord Railway Company.	Jhumarbaq	Do.	Do.
54	Bara Bonapara	Unsettled	..	..	..
55	Bogapahar	Birendra Nath Sha	Bogapahar	Rajmahal	..
56	Bornapahar	Unsettled	..	..	..
57	Bara Betona	Birendra Nath Sha	Bara Betona	Rajmahal	Southal Parganas.
58	Bellhadri	Unsettled	..	..	..

APPENDIX IV—*contd.*Miscellaneous—*contd.*Statement No. 6—*contd.*APPENDIX I—*contd.*[Clause (a) of proviso to entry 1 in first column of Schedule]—*contd.*

No.	Name of mine.	Name of owner.	Situation.		
			Village.	Sub-division.	District.
(BIHAR AND ORISSA)— <i>contd.</i>					
STONE MINES— <i>contd.</i>					
59	Chalpahar Paktori Pahar.	E. B. Railway & Co.	Paktori Pahar	Rajmahal	Sonthal Parganas.
60	Chowki Pahar	A. S. Apoor	Chowki Pahar	Do.	Do.
61	Godaitongi	Seth Sundar Prasad	Gadaitongi	Do.	Do.
62	Gumapahar	Gurudeo Singh	Gumapahar	Do.	Do.
63	Gangupara	Keshab Chandra Banerjee.	Gangupara	Do.	Do.
64	Madia	Harinath Das	Madia	Do.	Do.
65	Maharajpur Hariu- kole.	T. S. Samanta	Dudhkole	Do.	Do.
66	Malitoke	E. B. Railway & Co.	Malitoke	Do.	Do.
67	Pathria Balapokhar	J. N. Mukherji	Pathria Bala- pokhar.	Do.	Do.
68	Baugatola, Harinkole and Sarwapur	K. K. Mukharji Brothers.	Baugatola Hariu- kole.	Do.	Do.
69	Sahibganj Block No. I	Birendra Nath Sha	Motijhurna	Do.	Do.
70	Sahibganj Block No. II.	J. N. Mukharji.	Bhagamari	Do.	Do.
71	Sahibganj Block No. III.	Sital Prasad Marwari	Adro Bedo	Do.	Do.
72	Sahibganj Block No. IV.	Sital Prasad Marwai	Golbandha	Do.	Do.
73	Sitapahar Patnibona	Nauji Mowji	Sitapahar Patni- bona.	Do.	Do.
74	Sitapahar Melitoke	Nardar Kartar Singh.	Malitoke	Do.	Do.
75	Surjapahar (Mali- toke).	Gurudeo Singh	Do.	Do.	Do.
76	Taljhari Old laterite quarry.	Parmanand Marwari	Ehairboni	Do.	Do.

APPENDIX IV—*contd.*Miscellaneous—*contd.*Statement No. 6—*contd.*APPENDIX I—*contd.*[Clause (a) of proviso to entry 1 in first column of Schedule]—*contd.*

No.	Name of mine.	Name of owner.	Situation.		
			Village.	Sub-division.	District.
		(BIHAR AND ORISSA)— <i>concl'd.</i> FIRECLAY MINE.			
1	Merrah . . .	Bengal Coal Co. Ltd.	Merrah . . .	...	Maubhum.
		(BOMBAY PRESIDENCY.) STONE MINES.			
1	Mazgaon Hill . . .	Bhagwandas Goverdhandas.	Mazgaon Hill . . .	F. Ward . . .	Town and Island of Bombay.
2	Chinchpoochly Hill . . .	S. N. Dobhalkar . . .	Kala Chowki . . .	Do. . .	Do.
3	Kalachouki Dadhar . . .	Do. . . .	Do. . . .	Do. . . .	Do.
4	Bhoiwada . . .	Vasantao A. Dobhalkar.	Parel . . .	Do. . . .	Do.
5	Golanji Hill . . .	Krishna Rama . . .	Sewri . . .	Do. . . .	Do.
6	Marin Hill . . .	E. M. Bose . . .	Mazgaon . . .	Mazgaon . . .	Do.
7	Nowrojihill Rowlihill	Nenshi Monji & Co. . .	Dongri . . .	...	Do.
8	Worli Hill . . .	Bombay Municipality	...	...	Do.
9	Kala Chowki . . .	Bhao Rao Radhuji . . .	Kala Chowki . . .	F. Ward . . .	Do.
10	Do. . . .	Hirachand Chimanji.	Do. . . .	Do. . . .	Do.
11	Do. . . .	Baboo Nandan . . .	Do. . . .	Do. . . .	Do.
12	Do. . . .	Shyam Rai Vithal . . .	Do. . . .	Do. . . .	Do.
13	Do. . . .	Maruti Hari Shevale.	Do. . . .	Do. . . .	Do.
14	Do. . . .	Surajprasad Ramratan.	Do. . . .	Do. . . .	Do.
15	Do. . . .	Tukaram Gangaram Wadekar.	Do. . . .	Do. . . .	Do.

APPENDIX IV—*contd.*Miscellaneous—*contd.*Statement No. 6—*contd.*APPENDIX I—*contd.*[Clause (a) of proviso to entry 1 in first column of Schedule]—*contd.*

No.	Name of mine.	Name of owner.	Situation.		
			Village.	Sub-division.	District.
(BOMBAY PRESIDENCY)— <i>contd.</i>					
STONE MINES— <i>contd.</i>					
16	Kala Chowki . . .	Jehangir B. J. Wadia	Kala Chowki	F. Ward	Town and Island of Bombay.
17	Do.	Ranjitsingh Shivnandan singh.	Do.	Do.	Do.
18	Danda	Municipality of Bandra.	Danda	Bandra	Bombay Suburban.
19	Sevalia	B., B. and C. I. Railway.	Sevalia	Thunra	Kaira.
20	Bohri	N. W. Railway	Bohri	Do.	Sukkur.
21	Orwad	Walji Bhimji	Orwad	Bulsar	Surat.
22	Khadki	Arjun Mavji	Khadki	Do.	Do.
23	Matiwada	Jaganji Dayabhai Patel.	Matiwada	Do.	Do.
24	Ratlao	B., B. and C. I. Railway.	Ratlao	Do.	Do.
25	Kachora	G. I. P. Railway	Kachora	Kalyan	Thana.
26	Anik	Bombay Port Trust	Anik and Mohal.	...	Bombay Suburban.
27	Virar	B., B. and C. I. Railway.	Virar	Bassein	Thana.
28	Kandivli	Government of Bombay, Public Works Department.	Kandivli	Falsette	Bombay Suburban.
29	Do.	Mugaseth and Sons	Do.	Do.	Do.
30	Malad	Do.	Malad	Do.	Do.

APPENDIX IV—*contd.*Miscellaneous—*contd.*Statement No. 6—*contd.*APPENDIX I—*contd.*[Clause (a) of proviso to entry 1 in first column of Schedule]—*contd.*

No.	Name of mine.	Name of owner.	Situation.		
			Village.	Sub-division.	District.
(BOMBAY PRESIDENCY)— <i>contd.</i>					
BAUXITE MINE.					
1	Taiyabpur Bauxite mine.	Killick, Nixon and Co.	Taiyabpur	Kapadvanj Taluka.	Kaira.
(BUEMA.)					
STONE MINES.					
1	Kyauktalono . . .	Government of Burma, Public Works Department.	Kyauktalono	Mudon	Amherst.
2	Do.	Khan Bahadur Ibrahim.	Do.	Do.	Do.
3	Shawbya	Fateh Ali	Shawbya	Bassein	Bassein.
4	Shabyedaung	Government of Burma, Public Works Department	Shabyedaung	...	Lower Chin dwin.
5	Oktalu	Maung Ba Than . . . . .	...	...	Mandalay.
6	Toubo	Do.	Toubo	Mandalay	Do.
7	Do.	Khan Bahadur Wali Mohammad.	Do.	Do.	Do.
8	Kyaukmitaung	Issa Panjabi, Public Works Department Contractor.	Kyukai . . . . .	...	Do.
9	Payangazu	Khan Bahadur Wali Mohammad.	Payangazu . . . . .	...	Meiktila.
10	Kwegu	Government of Burma, Public Works Department.	Kyaujyuntaung	Mergui.
11	Pagaya	Do.	Pagaya	Tavoy	Tavoy.

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APPENDIX IV—*contd.*Miscellaneous—*contd.*Statement No. 6—*contd.*APPENDIX I—*contd.*[Clause (a) of proviso to entry 1 in first column of Schedule]—*contd.*

No.	Name of mine.	Name of owner	Situation.		
			Village .	Sub-division.	District.
(BURMA— <i>contd.</i>)					
STONE MINES— <i>concl.</i>					
12	Thabya . . .	Government of Burma, Public Works De- partment.	Thabya . . .	Tavoy . . .	Tavoy.
13	Thingandou . . .	Do. . . .	Thingandon . . .	Do. . . .	Do.
14	Zaha	Do. . . .	Zaha	Do. . . .	Do.
15	Kyaukmedaung . . .	Do. . . .	Kyaukmedaung . . .	Do. . . .	Do.
16	Hinduywa	Do. . . .	Hinduywa	Do. . . .	Do.
17	Kamasaing	Do. . . .	Kamasaing	Kyaikto . . .	Thaton.
18	Mokpulin	Government of Burma, Jail Department.	Mokpulin	Do. . . .	Do.
19	Kyaikto	Khan Bahadur Ibra- him.	Kyaikto	Do. . . .	Do.
20	Martaban	Do. . . .	Martaban	Paung	Do.
21	Mayangon	Do. . . .	Tauogle	Kyaikto . . .	Do.
22	Yinyein	Do	Yawadanshwe . . .	Paung	Do.
23	Maungdaung	Mokpulin Stone Co. .	Maungdaung . . .	Kyaikto . . .	Do.
24	Taungzun	Omanu Mnti Khan & Co.	Taungzun	Do. . . .	Do.
25	Pyu	Khan Bahadur Ibra- him.	Pyu	Toungoo . . .	Toungoo.
26	Ye-o-Zin	Government of Burma, Public Works De- partment.	Ye-o-Zin on the Toungoo-Thand- aung Road	Do.	Do.

APPENDIX IV—*contd.*Miscellaneous—*contd.*Statement No. 6—*contd.*APPENDIX I—*contd.*[Clause (a) of proviso to entry 1 in first column of Schedule]—*contd.*

No.	Name of mine.	Name of owner.	Situation.		
			Village.	Sub-division.	District.
(BURMA)— <i>contd.</i>					
LIMESTONE MINE.					
1	Hsaikhao . . .	Burma Corporation Limited.	Hsaikhao . . .	Hecuwi	N. S. States.
2	Manmaklang . . .	Do. . .	Manmaklang . . .	Do. . .	F. S. States.
3	Naumi . . .	Do. . .	Naumi . . .	Do. . .	N. S. States.
4	Nakhun . . .	Do. . .	Nakhun . . .	Do. . .	Do.
(CENTRAL PROVINCES.)					
STONE MINES.					
1	Paras . . .	G. I. P. Railway	Paras . . .	Balapur . . .	Akola (Berar).
2	Katepurna . . .	Do. . .	Katepurna . . .	Murtizapur . . .	Do.
3	Wai . . .	Do. . .	Wai . . .	Chandur . . .	Amraoti.
4	Konda Nalla . . .	Rajawasta, Contractor	Konda . . .	Bhandak . . .	Chanda.
5	Borkhedi . . .	Do. . .	Borkhedi . . .	...	Nagpur.
LIMESTONE MINES.					
1	Baraduar . . .	Tata Iron & Steel Co. Ltd.	Lumarpara . . .	...	Bilaspur.
2	Paraghat . . .	Jairam Valjee . . .	Parsoda & Khairra . . .	...	Do.
O CREE MINES.					
1	Bhiwkhund . . .	Hechambhey & Sons	Bhiwkhund . . .	...	Chanda.
2	Haveli Range . . .	Abdul Hussainmulla Hasausly.	Haveli Range Forest . . .	...	Do.
FULLERS EARTH MINE.					
1	Tikuria . . .	G, H. Cock & Sons . . .	Tikuria . . .	...	Jubbulpur.

APPENDIX IV—*contd.*Miscellaneous—*contd.*Statement No. 6.—*contd.*APPENDIX I—*contd.*[Clause (a) of proviso to entry 1 in first column of Schedule]—*contd.*

No.	Name of mine.	Name of owner	Situation.		
			Village.	Sub-division.	District.
(CENTRAL PROVINCES)— <i>contd.</i>					
FIRECLAY MINES.					
1	Hardua . . .	Burn & Co., Limited .	Hardua . . .	Katui . . .	Jubbulpur.
2	Pit No. 1 . . .	Do. . .	Shoiteria . . .	Do. . .	Do.
3	Hardua . . .	Lately owned by Kalyanji Govindji.	Hardua . . .	Do. . .	Do.
4	Polipathar . . .	Perfect Pottery Co., Limited.	Polipathar . . .	... . .	Do.
(MADRAS PRESIDENCY.)					
STONE MINES.					
1	Pallavaram . . .	Madras Corporation .	Pallavaram . . .	Saidapet Tq.	Chingleput.
2	Pallavaram No. 3 . . .	Cantonment Authority.	St. Thomas' Mount and Pallavaram.	Do. . .	Do.
3	Pallavaram . . .	Mahdi Hussain Khan.	Pallavaram . . .	Do. . .	Do.
4	Trisulam . . .	Madras Port Trust .	Trisulam . . .	Do. . .	Do.
5	Thattankunnu-Me- ousambakam.	Garrison Engineer. Military Department Fort St. George, Madras.	Do. . .	Do. . .	Do.
6	Agraharam (S. No. 11).	Dorbalapada Venkata Sastry.	Kolankonda . . .	Mangalgiri . . .	Gudur.
7	Kolankonda (S. No. 12).	M. & S. M. Railway .	Do. . .	Do. . .	Do.
8	Kolankonda . . .	Public Works De- partment Krishna Western Division, Bezwada.	Do. . .	Do. . .	Do.

APPENDIX IV—*contd.*Miscellaneous—*contd.*Statement No. 6.—*contd.*APPENDIX I—*contd.*[Clause (a) of proviso to entry 1 in first column of Schedule]—*contd.*

No.	Name of mine.	Name of owner.	Situation.		
			Village.	Sub-division	District.
(MADRAS PRESIDENCY)— <i>contd.</i>					
STONE MINES— <i>contd.</i>					
9	Kolankonda . . .	District Board, Guntur.	Kolankonda . . .	Mangalgiri . . .	Guntur.
10	Tadepalli . . .	Do. . .	Tadepalli . . .	Do. . .	Do.
11	Tadepalli and Sitanagaram.	Public Works Department, Krishna Western Division, Beawada.	Tadepalli and Sitanagaram.	Do. . .	Do.
12	Sitanagaram (S. No. 344/6).	Do. . .	Sitanagaram . . .	Do. . .	Do.
13	Tadepalli . . .	Lately owned by Municipal Council, Tenali.	Tadepalli . . .	Do. . .	Do.
14	Sanipparai . . .	S. I. Railway Co., Limited.	Edamalapet . . .	Trichinopoly.	Trichinopoly.
15	Katheru . . .	A. Lakshmanaswamy Naidu and others.	Katheru . . .	Rajmundry . . .	East Godavari.
16	Vemula, S. No. 1021 . . .	Tiffin and Co. . . .	Vemula . . .	Puliyendla taluk, Jammalamadugu sub-division.	Cuddapah
17	Molagupparai . . .	Military Department.	Trichinopoly Town.	Trichinopoly.	Trichinopoly.
BARYTES MINES.					
1	Kothapalli . . .	Tiffin & Co. . . .	Kothapalli . . .	Puliyardla Tq.	Cuddapah.
2	Block Nos. 21A & 21B.	B. P. Seshareddy . . .	Kommemari . . .	Dhone . . .	Kurnool.
3	Betamcherla R. F. . .	Do. . .	Kolamalapalli . . .	Do. . .	Do.

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APPENDIX IV—*contd.*Miscellaneous—*contd.*Statement No.—6—*contd.*APPENDIX I—*contd.*[Clause (a) of proviso to entry 1 in first column of Schedule].—*contd.*

No.	Name of mine.	Name of owner.	Situation.		
			Village.	Sub-division.	District.
(PUNJAB).					
STONE MINES.					
1	Taxila	Hukum Chand	Taxila . . . .	...	Rawalpindi.
2	Chambal and Chauwala.	P. W. Department (Irrigation Department).	Chambal and Chauwala.	Pind Dadan Khan.	Jhelum.
3	Taxila	Civil Department c/o Deputy Commissioner, Rawalpindi.	Taxila . . . .	...	Rawalpindi.
4	Saugla Hill	Government of the Punjab, Public Works Department (Irrigation Department).	Saugla Hill . . . .	...	Sheikhupura.
5	Do	N. W. Railway	Do . . . .	...	Do.
LIME STONE MINES.					
1	Wah	Punjab Portland Cement Ltd.	Wah	Attock	Attock.
2	Usmankhattar	Krishna Lall Malhotra.	Usmankhattar	Rawalpindi	Rawalpindi.
3	Sangjani	Sangjani Stone Co., Limited.	Sangjani	Do	Do.
4	Tarki	Government of the Punjab, Public Works Department, Buildings and Roads Branch.	Tarki	Jhelum	Jhelum.
5	Paikhel	N. W. Railway	Swance	Mianwali	Mianwali.

APPENDIX IV—*concl.*Miscellaneous—*concl.*Statement No. 6—*concl.*APPENDIX I—*concl.*[Clause (a) of proviso to entry 1 in first column of Schedule]—*concl.*

No.	Name of mine.	Name of owner.	Situation.		
			Village.	Sub-division.	District.
		(UNITED PROVINCES.)			
		STONE MINE.			
1	Hardari Nos. 1 and 2	Pt. Shiamlal Tara Chand and Company.	Hardari . .	Lalitpur .	Jhansi.
		OCRE MINE.			
1	Lakhanpur	E. P. Mustaphy	Lakhanpur .	...	Banda.

APPENDIX II.

FORM OF REPORT.

[Condition 1 in third column relating to entry in first column of Schedule.]

1. Name and situation of the mine.
2. Name of mineral worked.
3. Name and postal address of owner.
4. Name and postal address of manager.
5. Depth of the mine measured from its highest to its lowest point.
6. Number of persons employed in the mine.
7. Whether explosives are used in the mine.
8. The general condition of the mine as to safety in working.
9. Whether underground workings have been made or are likely to be made.
10. The date on which the mine was opened (for new mines only).

Date _____

Signature of owner, agent or manager.

A. G. CLOW,

Offg. Secy. to the Govt. of India.

APPENDIX IV—*contd.*Miscellaneous—*contd.*

Statement No. 7.

NOTIFICATION.

New Delhi, the 11th December 1935.

No. M.-1051.—In exercise of the powers conferred by sub-section (1) of section 46 of the Indian Mines Act, 1923 (IV of 1923), the Governor General in Council is pleased to direct that the following amendment shall be made in the Schedule to the Notification of the Government of India in the Department of Industries and Labour, No. M.-1051, dated the 1st October 1935, namely :—

In the said Schedule, after entry 13 the following entry shall be added, namely :—

<p>" 14 Winding enginemen, Engine and powerhouse attendants, Banksmen, Boiler Firemen, Trolley-men and trammers, Persons working on mechanical screening and loading plants; and Fan attendants.</p>	<p>The provisions contained in sections 22-B (2) and 28 (2).</p>	<p>(1) The period of work of these workers shall not exceed eight hours in any one day.</p> <p>(2) The entries in the register prescribed by section 28 (1) shall be such that workers working in accordance therewith are not working in contravention of any of the conditions of Chapter VI of the Act other than those from which exemption is given, or in contravention of condition (1)."</p>
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A. G. CLOW,

Offg. Joint Secretary to the Government of India.

APPENDIX IV—*contd.*Miscellaneous—*contd.*

Statement No. 8.

Circular No. 1 of 1935.

Dated, Dhanbad, the 1st July 1935.

MEMORANDUM FOR MINE OWNERS, AGENTS AND MANAGERS.

The Indian Mines (Amendment) Act, 1935, which makes extensive amendments to the Act of 1923, merits careful study by all concerned with mine management. The amendments take effect from the 1st October 1935. The most important changes are as follows :—

- (1) "Children" have long been debarred from employment either above or below ground. From the 1st October 1935 persons under fifteen years of age are "children", and must be excluded from employment and from entering the underground workings. In addition, persons between fifteen and seventeen years of age must be excluded from work underground unless they have obtained medical certificates of fitness. These certificates will be granted under rules to be made by the local Government. They will be kept by the Manager, and each certificate holder must carry while at work a token giving a reference to his certificate.
- (2) Local Governments are empowered to require the maintenance of a register of *certain minor accidents*, or to direct that such accidents should be reported, just as major accidents are reported at present. A copy of the entries in any register maintained under this new provision is to be forwarded to the Chief Inspector of Mines twice a year.
- (3) *Hours above ground* are limited to 54 in the week and 10 in the day, with a statutory rest interval of at least one hour for six hours' work. Overlapping relays above ground are prohibited. Further the "spreadover", i.e., the period between the times fixed for the worker to begin and end work on any day must not exceed 12 hours. [N.B.—The definition of "relay" and the proviso to section 22-B(3) should be carefully studied.]
- (4) *Hours below ground* are limited to nine in the day with a maximum spreadover of nine hours. No person employed in a mine is allowed to be in *any part* of the mine below ground except during the periods of work shown in respect of him in the register of employees. As these periods are limited to nine hours a day, it follows that time runs from the moment fixed and entered in the register for the first worker of a relay to leave the surface, and all the workers of the relay, at whatever time they enter, must be got out of the mine within nine hours of that moment. Overlapping relays are no longer prohibited and it will be permissible for the workmen of one relay to enter the mine at the same time as workmen of the previous relay are leaving. No separate weekly limit of hours is prescribed but as every person must have one rest day a week the aggregate permissible hours of work are 54 as at present.
- (5) *The notices of hours of work (section 23-B)* will have to show not only the time of the commencement and the end of work for each relay both above ground and below ground but also in the case of persons employed above ground the time of the commencement and of the end of the intervals for rest. The necessary amendment to the form of notice will be made by local Governments. The amending Act specifically provides that no persons shall be allowed to work otherwise than in accordance with the notice and that copies of all amending notices are to be forwarded to the Chief Inspector.

APPENDIX IV—*contd.*Miscellaneous—*contd.*Statement No. 8—*contd.*
Circular No 1 of 1935—*contd.*

(6) The register of employees will not, from the 1st October 1935, be used as an attendance register. It will show for each person employed certain specified particulars, and entries (which must be in accordance with the hours provisions of the law) will be changed only when necessary, e.g., when the nature of a man's employment changes, or his periods of work are altered. Power has, however, been given to local Governments to require the maintenance of a separate register to show at any moment the name of every person then working below ground in the mine. In the event of a serious accident it may be of great importance to the management to know what persons must be accounted for, and this separate register is intended to give the necessary information. The forms of both registers will be prescribed by local Government.

2. The working of the new Act—especially the hours provisions—may present difficulties at first, and the Mines Department will be glad to give further advice and assistance if asked to do so.

D. PENMAN,
Chief Inspector of Mines in India.

Statement No. 9.

No. 8891-903-G.

Dated Dhanbad, the 30th July 1935.

To

The Agents of 13 Collieries in the Jharia

Coalfield where fires existed.

Sir/Gentlemen,

I have the honour to refer to the areas which are on fire in your colliery, and to enquire to what extent you are complying with the provisions of Regulations 77, 70(4) and 72(2) of the Indian Coal Mines Regulations, 1926. I suggest that all competent persons making inspections under Regulations 70 and 72 in any ventilating district of the mine in which there is a fire or in connection with fire stoppings should possess a Sirdar's Certificate endorsed for gas-testing and should carry with him and use on his statutory inspections (a) a locked safety lamp in addition to an electric torch if considered necessary and (b) a small bird or mouse in a cage. By means of the safety lamp inflammable gas may be detected and also Carbon Dioxide. I wish further to invite your attention to Regulation 72 and to ask if the requirements of that regulation are also being fully complied with.

I have the honour to be,

Sir/Gentlemen,

Your most obedient servant,

D. PENMAN,

Chief Inspector of Mines in India.

APPENDIX IV—*contd.*Miscellaneous—*contd.*

Statement No. 10.

No. 8908-20-G.

Dated Dhanbad, the 30th July 1935.

To

The Agents of 13 Collieries in the Jharia

Coalfield where fires existed.

Sir/Gentlemen,

In continuation of my letter No. 8391-903-G., dated the 30th July 1935, I have the honour to invite your attention to the danger that may arise through water in considerable quantity finding its way into an area which is on fire, and to request that steps may be taken at your colliery by regular daily inspection of the surface to ensure that there is no likelihood of a considerable quantity of water finding its way through any cracks or crevices that may exist on the surface to an underground fire. If there are any cracks or crevices into which water may find access I suggest that you take steps at once to have such cracks or crevices filled in.

I have the honour to be,

Sir/Gentlemen,

Your most obedient servant,

D. PENMAN,

Chief Inspector of Mines in India.

Statement No. 11.

No. 9533-9782-G.

Dated Dhanbad, the 12th August 1935.

To

The Agents and Managers of Coal Mines

in Jharia Coalfield.

Sir,

I have the honour to refer to the heavy floods recorded this morning and to ask you kindly to ascertain the highest flood level in the nearest jore to your colliery and to mark the same with a conspicuous and permanent mark. This is necessary in order to be able to determine the adequate safeguards which will be necessary in the case of future flooding.

I have the honour to be,

Sir,

Your most obedient servant,

D. PENMAN,

Chief Inspector of Mines in India.

APPENDIX IV—contd.

Miscellaneous—contd.

Statement No. 12.

Circular No. 2 of 1935.*Dated Dhanbad, the 28th October 1935.*

The attention of OWNERS, AGENTS and MANAGERS of mines in which safety lamps are in general use or in which inspections are made with a safety lamp is hereby drawn to the desirability of clearing away any accumulation of inflammable gas without delay.

Occasionally I have had reports of working places having been fenced off on account of accumulations of inflammable gas and left in that condition for days and sometimes weeks. This is a most undesirable practice. It should always be the aim of the management to clear away accumulations of gas without delay. If an accumulation cannot be cleared away at once, the correct procedure is to fence securely all entrances to the place in which the accumulation has been found and then to arrange *as soon as possible* to clear away the gas by improving the ventilation in the place.

D. PENMAN,*Chief Inspector of Mines in India.*