

Department of Mines, India

REPORT

OF THE

CHIEF INSPECTOR OF MINES IN INDIA

Under the Indian Mines Act (VIII of 1901)

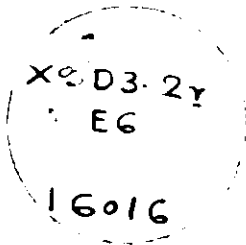
FOR THE

YEAR ENDING 31st DECEMBER

1916

BY

G. F. ADAMS, M. Inst. C. E.,
Chief Inspector of Mines in India



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CALCUTTA
SUPERINTENDENT GOVERNMENT PRINTING, INDIA
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Department of Mines, India

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APPENDIX I.

STATISTICS OF MINES AND MINERALS.

Table No. 1.

Number of mines regulated by the Indian Mines Act, 1901, number of workers and output of minerals, during the year 1916.

| PROVINCE. | District and mineral field. | Number of mines under the scope of the Act. | NUMBER OF MINES. | | NUMBER OF MINES INSPECTED DURING THE YEAR. | | TOTAL OUTPUT. Tons | AVERAGE NUMBER OF PERSONS EMPLOYED DAILY IN AND ABOUT THE MINES. | | | | | | | | Grand total below and above ground. |
|-------------|-----------------------------|---|-----------------------------|---------------------------------|--|------------------------|-----------------------|--|----------------|----------------------|---------------------|---------------|----------------|----------------------|---------------------|-------------------------------------|
| | | | Worked by mechanical power. | Not worked by mechanical power. | Number of mines inspected. | Number of inspections. | | BELOW GROUND. | | | | ABOVE GROUND. | | | | |
| | | | | | | | | Adult males. | Adult females. | Children (under 12). | Total below ground. | Adult males. | Adult females. | Children (under 12). | Total above ground. | |
| Assam | Lakhimpur | 7 | 4 | 3 | 7 | 23 | 283,830 | 1,572 | 233 | ... | 1,805 | 497 | 261 | 48 | 806 | 2,611 |
| | Naga Hills | 1 | ... | 1 | 1 | 2 | 3,135 | 52 | ... | ... | 52 | 117 | 14 | ... | 131 | 183 |
| | TOTAL | 8 | 4 | 4 | 8 | 25 | 286,965 | 1,624 | 233 | ... | 1,857 | 614 | 275 | 48 | 937 | 2,794 |
| | A.—COAL. | | | | | | | | | | | | | | | |
| Baluchistan | Kalat | 5 | ... | 5 | 1 | 1 | 2,763 | 55 | ... | ... | 55 | 41 | .. | ... | 41 | 96 |
| | Loralai | 1 | ... | 1 | ... | ... | 97 | 12 | ... | ... | 12 | 8 | ... | ... | 8 | 20 |
| | Quetta-Pishin | 9 | ... | 9 | ... | ... | 6,318 | 86 | ... | ... | 86 | 41 | ... | ... | 41 | 127 |
| | Sibi-Khost | 7 | 2 | 5 | 5 | 10 | 32,906 | 541 | ... | ... | 541 | 302 | ... | 25 | 327 | 868 |
| | TOTAL | 22 | 2 | 20 | 6 | 11 | 42,163 | 694 | ... | ... | 694 | 392 | ... | 25 | 417 | 1,111 |
| Bengal | Bankura, Raniganj | 2 | ... | 2 | 1 | 1 | 6,965 | 41 | 22 | ... | 63 | 28 | 13 | ... | 41 | 104 |
| | Birbhum " | 1 | ... | 1 | ... | ... | 2,055 | 10 | 7 | ... | 17 | 10 | 2 | ... | 12 | 29 |
| | Burdwan " | 166 | 140 | 26 | 143 | 309 | 4,983,356 | 17,551 | 10,089 | 135 | 27,775 | 9,457 | 5,325 | 350 | 15,132 | 42,907 |
| | TOTAL | 169 | 140 | 29 | 144 | 310 | 4,992,376 | 17,602 | 10,118 | 135 | 27,855 | 9,495 | 5,340 | 350 | 15,185 | 43,040 |

APPENDIX I—contd.

STATISTICS OF MINES AND MINERALS—contd.

Table No. 1—contd.

Number of mines regulated by the Indian Mines Act, 1901, number of workers and output of minerals, during the year 1916—contd.

| PROVINCE. | District and mineral field. | Number of mines under the scope of the Act. | NUMBER OF MINES. | | NUMBER OF MINES INSPECTED DURING THE YEAR. | | TOTAL OUTPUT. | AVERAGE NUMBER OF PERSONS EMPLOYED DAILY IN AND ABOUT THE MINES. | | | | | | | | Grand total below and above ground. | |
|----------------------------|-----------------------------|---|-----------------------------|---------------------------------|--|------------------------|-------------------|--|----------------|----------------------|---------------------|---------------|----------------|----------------------|---------------------|-------------------------------------|--------|
| | | | Worked by mechanical power. | Not worked by mechanical power. | Number of mines inspected. | Number of inspections. | | BELOW GROUND. | | | | ABOVE GROUND. | | | | | |
| | | | | | | | | Adult males. | Adult females. | Children (under 12). | Total below ground. | Adult males. | Adult females. | Children (under 12). | Total above ground. | | |
| A.—COAL—contd. | | | | | | | | | | | | | | | | | |
| Bihar and Orissa | Hazaribagh { | Bokaro-Ramgarh | 7 | 1 | 0 | 2 | 5 | 192,365 | 821 | 756 | 2 | 1,579 | 382 | 97 | ... | 479 | 2,058 |
| | | Giridih | 9 | 4 | 5 | 6 | 13 | 866,055 | 5,035 | 1,972 | ... | 7,007 | 2,082 | 883 | 4 | 2,969 | 9,976 |
| | Manbhum { | Jharia | 5 | 3 | 2 | 5 | 9 | 32,988 | 145 | 88 | 6 | 239 | 111 | 42 | 5 | 158 | 397 |
| | | Jharia | 249 | 156 | 93 | 172 | 333 | 8,917,330 | 24,598 | 19,901 | 363 | 44,862 | 17,774 | 7,577 | 1,362 | 26,713 | 71,575 |
| | Sambalpur, Hingir-Rampur | Raniganj | 67 | 9 | 58 | 63 | 79 | 541,404 | 2,200 | 1,232 | 2 | 3,434 | 1,453 | 739 | 63 | 2,255 | 5,689 |
| | | Palamau, Daltonganj | 1 | 1 | ... | 1 | 2 | 76,298 | 266 | 160 | 19 | 445 | 282 | 50 | 35 | 367 | 812 |
| | Bonthal Parganas. { | Sambalpur, Hingir-Rampur | 1 | 1 | ... | ... | ... | 59,737 | 341 | 183 | ... | 524 | 189 | 27 | 14 | 230 | 754 |
| | | Jainty | 1 | 1 | ... | 1 | 1 | 74,518 | 131 | 170 | ... | 301 | 215 | 45 | 14 | 274 | 575 |
| | Bonthal Parganas. { | Raniganj | 4 | ... | 4 | ... | ... | 1,527 | 22 | 12 | ... | 34 | 9 | 21 | ... | 30 | 64 |
| TOTAL | | 344 | 176 | 168 | 250 | 442 | 10,762,222 | 33,559 | 24,474 | 392 | 58,425 | 22,997 | 9,481 | 1,497 | 33,175 | 91,900 | |
| Central Provinces | Chanda, Ballarpur { | Chanda, Ballarpur | 3 | 2 | 1 | 3 | 4 | 84,889 | 533 | 21 | 2 | 556 | 265 | 66 | 3 | 334 | 890 |
| | | Chhindwara, Pench Valley | 7 | 7 | ... | 3 | 4 | 154,548 | 754 | 280 | 49 | 1,083 | 218 | 135 | 41 | 394 | 1,477 |
| | | Narsinghpur, Mohpani | 1 | 1 | ... | 1 | 3 | 48,395 | 501 | 220 | ... | 721 | 416 | 51 | ... | 467 | 1,188 |
| | | Yectmal | 1 | ... | 1 | ... | ... | ... | 1 | ... | ... | 1 | 2 | ... | ... | 2 | 3 |
| | TOTAL | 12 | 10 | 2 | 7 | 11 | 287,832 | 1,789 | 521 | 51 | 2,361 | 901 | 252 | 44 | 1,197 | 3,558 | |

| | | | | | | | | | | | | | | | | | |
|-------------------------------|------------------------|-----|-----|-----|-----|--------|------------|--------|--------|-------|--------|--------|--------|-------|--------|---------|--|
| North-West Frontier Province. | Hazara | 1 | ... | 1 | ... | ... | 75 | 7 | ... | ... | 7 | ... | ... | ... | ... | 7 | |
| Panjab | Jhelum | 6 | ... | 6 | 6 | 8 | 44,944 | 631 | ... | 5 | 636 | 299 | ... | 8 | 307 | 943 | |
| | Mianwali | 1 | ... | 1 | ... | ... | 817 | 8 | ... | ... | 8 | 7 | ... | ... | 7 | 16 | |
| | Shahpur | 2 | ... | 2 | 1 | 1 | 1,688 | 43 | ... | ... | 43 | 48 | ... | ... | 48 | 91 | |
| | TOTAL | 9 | ... | 9 | 7 | 9 | 47,449 | 682 | ... | 5 | 687 | 354 | ... | 8 | 362 | 1,019 | |
| GRAND TOTAL (COAL) FOR 1916. | | 565 | 332 | 233 | 422 | 808 | 16,419,082 | 55,957 | 35,348 | 583 | 91,886 | 34,253 | 15,348 | 1,972 | 51,573 | 143,459 | |
| | " " OF PRECEDING YEAR. | 583 | 334 | 249 | 429 | 884 | 16,352,480 | 59,111 | 35,596 | 806 | 95,513 | 32,195 | 15,814 | 2,015 | 50,024 | 145,537 | |
| | DIFFERENCE | -18 | -2 | -16 | -7 | -76 | +66,602 | -3,154 | -250 | -223 | -3,627 | +2,058 | -466 | -43 | +1,549 | -2,078 | |
| Bihar and Orissa | B.-MICA. | | | | | | | | | | | | | | | | |
| | | | | | | | Cwts. | | | | | | | | | | |
| | Bhagalpur | 1 | ... | 1 | ... | ... | 19 | 15 | 8 | ... | 23 | ... | ... | ... | ... | 23 | |
| | Gaya | 44 | 5 | 39 | ... | ... | 4,749 | 713 | 370 | 90 | 1,173 | 305 | 240 | 172 | 717 | 1,890 | |
| | Hazaribagh | 235 | 35 | 250 | 35 | 35 | 14,141 | 3,489 | 2,001 | 693 | 6,183 | 1,814 | 970 | 676 | 3,460 | 9,643 | |
| Monghyr | 7 | 5 | 2 | 1 | 2 | 524 | 138 | 78 | 21 | 237 | 43 | 62 | 42 | 137 | 374 | | |
| TOTAL | 337 | 45 | 292 | 36 | 37 | 19,433 | 4,355 | 2,457 | 804 | 7,616 | 2,162 | 1,262 | 890 | 4,314 | 11,930 | | |
| Madras | Nellore | 102 | 15 | 87 | 39 | 39 | 15,552 | 1,787 | 1,170 | 206 | 9,163 | 516 | 325 | 197 | 1,038 | 4,201 | |
| | Salem | 1 | ... | 1 | ... | ... | 106 | 14 | ... | ... | 14 | 21 | 17 | 1 | 39 | 53 | |
| | TOTAL | 103 | 15 | 88 | 39 | 39 | 15,658 | 1,801 | 1,170 | 206 | 9,177 | 537 | 342 | 198 | 1,077 | 4,254 | |

APPENDIX I—contd.

STATISTICS OF MINES AND MINERALS—contd.

Table No. 1—contd.

Number of mines regulated by the Indian Mines Act, 1901, number of workers and output of minerals, during the year 1916—contd.

| Province. | District and mineral field. | Number of mines under the scope of the Act. | NUMBER OF MINES. | | NUMBER OF MINES INSPECTED DURING THE YEAR. | | TOTAL OUTPUT. | AVERAGE NUMBER OF PERSONS EMPLOYED DAILY IN AND ABOUT THE MINES. | | | | | | | | Grand total below and above ground. |
|-----------------------------|------------------------------|---|-----------------------------|---------------------------------|--|------------------------|---------------|--|----------------|----------------------|---------------------|---------------|----------------|----------------------|---------------------|-------------------------------------|
| | | | Worked by mechanical power. | Not worked by mechanical power. | Number of mines inspected. | Number of inspections. | | BELOW GROUND. | | | | ABOVE GROUND. | | | | |
| | | | | | | | | Adult males. | Adult females. | Children (under 12). | Total below ground. | Adult males. | Adult females. | Children (under 12). | Total above ground. | |
| B.—MICA—contd. | | | | | | | | | | | | | | | | |
| Cwts. | | | | | | | | | | | | | | | | |
| Rajputana | Ajmer-Merwara | 11 | ... | 11 | ... | ... | 826 | 207 | 44 | 17 | 268 | 31 | ... | ... | 31 | 299 |
| | Nasirabad | 1 | ... | 1 | .. | ... | 61 | 4 | 3 | ... | 7 | 1 | ... | ... | 1 | 8 |
| | TOTAL | 12 | ... | 12 | ... | ... | 887 | 211 | 47 | 17 | 275 | 32 | .. | ... | 32 | 307 |
| | GRAND TOTAL (MICA) FOR 1916. | 452 | 60 | 392 | 75 | 76 | 35,978 | 6,367 | 3,674 | 1,027 | 11,068 | 2,731 | 1,604 | 1,068 | 5,423 | 16,491 |
| | " " OF PRECEDING YEAR. | 366 | 13 | 353 | 34 | 35 | 24,063 | 3,865 | 2,179 | 474 | 6,518 | 1,751 | 1,617 | 905 | 4,273 | 10,791 |
| | DIFFERENCE | +86 | +47 | +39 | +41 | +41 | +11,915 | +2,502 | +1,495 | +553 | +4,550 | +980 | -13 | +183 | +1,150 | +5,700 |
| C.—MANGANESE. | | | | | | | | | | | | | | | | |
| Tons. | | | | | | | | | | | | | | | | |
| Bombay | Belgaum | 1 | ... | 1 | ... | ... | 1,765 | 63 | 93 | ... | 156 | 32 | 20 | ... | 52 | 208 |
| | Panch Mahals | 2 | 2 | ... | 2 | 3 | 46,160 | 800 | 355 | 124 | 1,279 | 223 | 50 | 12 | 285 | 1,564 |
| | TOTAL | 3 | 2 | 1 | 2 | 3 | 47,925 | 863 | 448 | 124 | 1,435 | 255 | 70 | 12 | 337 | 1,772 |
| Central Provinces | Balaghat | 16 | ... | 16 | 16 | 16 | 241,771 | 2,643 | 2,047 | 100 | 4,790 | 502 | 334 | 51 | 887 | 5,677 |
| | Bhandara | 11 | ... | 11 | 5 | 5 | 74,882 | 686 | 555 | 31 | 1,272 | 323 | 190 | 62 | 584 | 1,856 |
| | Chhindwara | 2 | 1 | 1 | 2 | 3 | 53,882 | 692 | 678 | 18 | 1,388 | 202 | 43 | 9 | 254 | 1,642 |
| | Jabalpur | 1 | ... | 1 | ... | ... | 270 | 7 | 7 | ... | 14 | ... | ... | ... | ... | 14 |
| | Nagpur | 24 | 1 | 23 | 17 | 18 | 146,547 | 1,657 | 1,436 | 11 | 3,104 | 652 | 471 | 57 | 1,180 | 4,284 |
| | TOTAL | 54 | 2 | 52 | 40 | 42 | 517,352 | 5,685 | 4,723 | 160 | 10,568 | 1,679 | 1,047 | 179 | 2,905 | 13,473 |

| | | | | | | | | | | | | | | | | |
|-----------------------------|--------------------------------------|-----|-----|-----|---------------|-----|----------|--------|--------|-----|--------|-------|-------|-----|-------|--------|
| Madras | Vizagapatam | 5 | ... | 5 | 2 | 2 | 2,755 | 121 | 84 | ... | 205 | 59 | 21 | 8 | 88 | 213 |
| | GRAND TOTAL (MANGANESE) FOR 1916. | 62 | 4 | 58 | 44 | 47 | 568,032 | 6,869 | 5,255 | 284 | 12,208 | 1,993 | 1,138 | 199 | 3,330 | 15,538 |
| | " " OF PRECED- ING YEAR. | 50 | 4 | 46 | 29 | 30 | 378,172 | 3,914 | 3,246 | 215 | 7,375 | 1,365 | 868 | 162 | 2,415 | 9,790 |
| | DIFFERENCE | +12 | ... | +12 | +15 | +17 | +189,860 | +2,755 | +2,009 | +69 | +4,833 | +628 | +270 | +37 | +915 | +5,748 |
| | | | | | D.—LIMESTONE. | | | | | | | | | | | |
| | | | | | Tons. | | | | | | | | | | | |
| Central Provinces | Jabalpur, Katni | 34 | 5 | 29 | 14 | 15 | 44,905 | 369 | 697 | 26 | 1,092 | 203 | 196 | 34 | 433 | 1,525 |
| Panjab | Hoshiarpur | 1 | ... | 1 | ... | ... | 385 | 59 | ... | .. | 59 | 45 | ... | .. | 45 | 101 |
| | GRAND TOTAL (LIMESTONE) FOR 1916. | 35 | 5 | 30 | 14 | 15 | 45,290 | 428 | 697 | 26 | 1,151 | 248 | 196 | 34 | 478 | 1,629 |
| | " " OF PRECED- ING YEAR. | 26 | 4 | 22 | ... | ... | 64,179 | 537 | 911 | 25 | 1,473 | 169 | 228 | 37 | 434 | 1,907 |
| | DIFFERENCE | +9 | +1 | +8 | +14 | +15 | -18,889 | -109 | -214 | +1 | -322 | +79 | -32 | -3 | +44 | -378 |
| | | | | | E.—SALT. | | | | | | | | | | | |
| | | | | | Tons. | | | | | | | | | | | |
| Panjab | Jhelum | 2 | ... | 2 | 1 | 3 | 138,100 | 338 | 274 | 33 | 646 | 52 | ... | ... | 52 | 697 |
| | Mianwali | 1 | ... | 1 | 1 | 2 | 12,881 | 62 | ... | 15 | 77 | ... | ... | ... | ... | 77 |
| | Shahpur | 1 | ... | 1 | 1 | 2 | 9,376 | 25 | 21 | 7 | 53 | ... | ... | ... | ... | 53 |
| | GRAND TOTAL (SALT) FOR 1916. | 4 | ... | 4 | 3 | 7 | 160,357 | 425 | 295 | 55 | 775 | 53 | ... | ... | 52 | 827 |
| | " " OF PRECED- ING YEAR. | 4 | ... | 4 | 4 | 7 | 144,770 | 478 | 345 | 57 | 680 | 38 | ... | ... | 38 | 918 |
| | DIFFERENCE | ... | ... | ... | -1 | ... | +15,587 | -53 | -50 | -2 | +105 | +14 | ... | ... | +14 | -91 |

APPENDIX I—contd.

STATISTICS OF MINES AND MINERALS—contd.

Table No. 1—contd.

Number of mines regulated by the Indian Mines Act, 1901, number of workers and output of minerals, during the year 1916—contd.

| Provinces. | District and mineral field. | Number of mines under the scope of the Act. | NUMBER OF MINES. | | NUMBER OF MINES INSPECTED DURING THE YEAR. | | TOTAL OUTPUT. | AVERAGE NUMBER OF PERSONS EMPLOYED DAILY IN AND ABOUT THE MINES. | | | | | | | | |
|------------------------|------------------------------|---|-----------------------------|---------------------------------|--|------------------------|---|--|----------------|----------------------|---------------------|---------------|----------------|----------------------|---------------------|-------------------------------------|
| | | | Worked by mechanical power. | Not worked by mechanical power. | Number of mines inspected. | Number of inspections. | | BELOW GROUND. | | | | ABOVE GROUND. | | | | Grand total below and above ground. |
| | | | | | | | | Adult males. | Adult females. | Children (under 13). | Total below ground. | Adult males. | Adult females. | Children (under 13). | Total above ground. | |
| Burma | Mogok | ... | ... | ... | ... | ... | F.—GEMS. (a)—Rubies. Carats. 136,783 | | | | | | | | | |
| | Mogok | 2 | 2 | ... | ... | ... | (b) Sapphires. 34,100 | 659 | ... | ... | 659 | 543 | ... | ... | 543 | 1,202 |
| | Mogok | ... | ... | ... | ... | ... | (c) Spinel. 38,841 | | | | | | | | | |
| | TOTAL | 2 | 2 | ... | ... | ... | 209,724 | 659 | ... | ... | 659 | 543 | ... | ... | 543 | 1,202 |
| | GRAND TOTAL (Gems) FOR 1916. | 2 | 2 | ... | ... | ... | 209,724 | 659 | ... | ... | 659 | 543 | ... | ... | 543 | 1,202 |
| " " OF PRECEDING YEAR. | 3 | 3 | ... | ... | ... | 251,449 | 551 | ... | ... | 551 | 421 | ... | ... | 421 | 972 | |
| DIFFERENCE | -1 | -1 | ... | ... | ... | -41,725 | +108 | ... | ... | +108 | +122 | ... | ... | +122 | +230 | |
| Bihar and Orissa | Monghyr | 4 | ... | 4 | ... | ... | G.—SLATE. Tons. 2,136 | 138 | 42 | ... | 180 | 49 | .. | ... | 49 | 229 |
| | Gurdaspur | 1 | ... | 1 | ... | ... | 69 | ... | ... | ... | 17 | ... | ... | ... | 17 | 17 |
| Panjab | Gurgaon | 4 | ... | 4 | ... | ... | 1,361 | 91 | ... | 28 | 119 | 9 | ... | ... | 11 | 130 |
| | Kangra | 5 | ... | 5 | ... | ... | 5,778 | 195 | ... | ... | 195 | 60 | 77 | 37 | 174 | 369 |

| | | TOTAL | 10 | ... | 10 | ... | ... | 7,208 | 286 | ... | 28 | 314 | 86 | 77 | 39 | 202 | 516 |
|-------------------------|---------------------|-------------------------------|-----|-----|-----|-----|-----|-------------|-----|-----|-----|-------|-----|-----|-----|-------|-------|
| | | GRAND TOTAL (SLATE) FOR 1916. | 14 | ... | 14 | ... | ... | 9,344 | 424 | 42 | 28 | 494 | 135 | 77 | 39 | 251 | 745 |
| | | " " OF PRECEDING YEAR. | 15 | ... | 15 | 3 | 3 | 10,610 | 391 | 94 | 110 | 595 | 226 | 12 | 18 | 256 | 851 |
| | | DIFFERENCE . . . | -1 | ... | -1 | -3 | -3 | -1,266 | +33 | -52 | -82 | -101 | -01 | +65 | +21 | -5 | -106 |
| | | H.—GOLD. | | | | | | | | | | | | | | | |
| Bihar and Orissa . . . | Singhbhum | | 1 | ... | 1 | ... | ... | Ozs. 864 | 30 | 18 | 3 | 51 | 30 | 19 | 17 | 66 | 117 |
| Madras | Anantapur | | 3 | 3 | ... | 3 | 7 | 22,371 | 931 | ... | ... | 931 | 728 | 147 | 131 | 1,006 | 1,937 |
| | | GRAND TOTAL (GOLD) FOR 1916. | 4 | 3 | 1 | 3 | 7 | 23,235 | 961 | 18 | 3 | 982 | 758 | 166 | 148 | 1,072 | 2,054 |
| | | " " OF PRECEDING YEAR. | 5 | 4 | 1 | 3 | 5 | 24,320 | 975 | 32 | ... | 1,007 | 833 | 181 | 142 | 1,156 | 2,163 |
| | | DIFFERENCE . . . | -1 | -1 | ... | ... | +2 | -1,085 | -14 | -14 | +3 | -25 | -75 | -15 | +6 | -84 | -109 |
| | | I.—IRON ORE. | | | | | | | | | | | | | | | |
| | | Tons. | | | | | | | | | | | | | | | |
| Bihar and Orissa . . . | Puri | | 1 | 1 | ... | ... | ... | 55 | ... | ... | ... | ... | 19 | ... | ... | 19 | 19 |
| | Singhbhum | | 1 | 1 | ... | ... | ... | 142,185 | 456 | 309 | 35 | 800 | 207 | 65 | ... | 272 | 1,072 |
| | TOTAL | | 2 | 2 | ... | ... | ... | 142,240 | 456 | 309 | 35 | 800 | 226 | 65 | ... | 291 | 1,091 |
| Central Provinces . . . | Jabalpur | | 1 | ... | 1 | ... | ... | 366 | ... | ... | ... | ... | 30 | 36 | 8 | 74 | 74 |
| | | GRAND TOTAL (IRON) FOR 1916. | 3 | 2 | 1 | ... | ... | 142,808 | 456 | 309 | 35 | 800 | 256 | 101 | 8 | 365 | 1,165 |
| | | " " OF PRECEDING YEAR. | 3 | 2 | 1 | ... | ... | 126,617 | 445 | 266 | 37 | 748 | 160 | 35 | 28 | 223 | 971 |
| | | DIFFERENCE . . . | ... | ... | ... | ... | ... | +15,989 | +11 | +43 | -2 | +52 | +96 | +66 | -20 | +142 | +194 |

APPENDIX I—contd.

STATISTICS OF MINES AND MINERALS—contd.

Table No. 1—contd.

Number of mines regulated by the Indian Mines Act, 1901, number of workers and output of minerals, during the year 1916—contd.

| PROVINCE. | District and mineral field. | Number of mines under the scope of the Act. | NUMBER OF MINES. | | NUMBER OF MINES INSPECTED DURING THE YEAR. | | TOTAL OUTPUT. | AVERAGE NUMBER OF PERSONS EMPLOYED DAILY IN AND ABOUT THE MINES. | | | | | | | | |
|-------------------|---------------------------------|---|-----------------------------|---------------------------------|--|------------------------|---------------|--|----------------|----------------------|---------------------|---------------|----------------|----------------------|---------------------|-------------------------------------|
| | | | Worked by mechanical power. | Not worked by mechanical power. | Number of mines inspected. | Number of inspections. | | BELOW GROUND. | | | | ABOVE GROUND. | | | | Grand total below and above ground. |
| | | | | | | | | Adult males. | Adult females. | Children (under 12). | Total below ground. | Adult males. | Adult females. | Children (under 12). | Total above ground. | |
| Bihar and Orissa | Singhbhum | 1 | 1 | ... | ... | ... | 160 | 16 | 12 | ... | 28 | 6 | 26 | ... | 32 | 60 |
| Burma | Mergui | 1 | ... | 1 | ... | ... | 3,776 | 200 | ... | ... | 200 | 65 | 50 | 6 | 101 | 301 |
| | Tavoy | 78 | 2 | 76 | 60 | 128 | 53,676 | 3,631 | 14 | 1 | 3,646 | 3,705 | 215 | 10 | 3,930 | 7,576 |
| | Thaton | 9 | ... | 9 | ... | ... | 1,455 | 446 | 76 | 26 | 548 | 111 | 36 | 7 | 154 | 702 |
| | TOTAL | 88 | 2 | 86 | 60 | 128 | 58,907 | 4,277 | 90 | 27 | 4,394 | 3,881 | 281 | 23 | 4,185 | 8,579 |
| Central Provinces | Nagpur | 1 | ... | 1 | ... | ... | 27 | 9 | 7 | ... | 16 | 2 | 3 | ... | 5 | 21 |
| | GRAND TOTAL (WOLFRAM) FOR 1916. | 90 | 3 | 87 | 60 | 128 | 59,094 | 4,302 | 109 | 27 | 4,438 | 3,889 | 310 | 23 | 4,222 | 8,660 |
| | " " OF PRECEDING YEAR. | 38 | 1 | 37 | ... | ... | 39,432 | 1,740 | 1 | ... | 1,741 | 1,336 | 110 | ... | 1,446 | 3,187 |
| | DIFFERENCE | +52 | +2 | +50 | +60 | +128 | +19,662 | +2,562 | +108 | +27 | +2,697 | +2,553 | +200 | +23 | +2,776 | +5,473 |

| | | K.—MAGNESITE. | | | | | | | | | | | | | | | |
|----------------------------|-------------------------------------|---------------|-----|-----|-----|-----|---------|------|------|------|-------|------|-----|-----|------|-------|--|
| | | Tons. | | | | | | | | | | | | | | | |
| Madras | Salem | 2 | ... | 2 | 2 | 2 | 17,540 | 382 | 462 | 479 | 1,323 | 77 | 11 | 29 | 117 | 1,440 | |
| | TOTAL OF PRECEDING YEAR | 2 | ... | 2 | ... | ... | 7,450 | 198 | 169 | 133 | 500 | 74 | ... | 28 | 102 | 602 | |
| | DIFFERENCE | ... | ... | ... | +2 | +2 | +10,090 | +184 | +293 | +346 | +823 | +3 | +11 | +1 | +15 | +838 | |
| | | L.—CHROMITE. | | | | | | | | | | | | | | | |
| | | Cwts. | | | | | | | | | | | | | | | |
| Baluchistan | Quetta-Fishin | 2 | 2 | ... | ... | ... | 340 | 21 | ... | ... | 21 | 14 | ... | ... | 14 | 35 | |
| | Zhob | 7 | ... | 7 | ... | ... | 69,600 | ... | ... | ... | ... | 439 | ... | ... | 439 | 439 | |
| | TOTAL | 9 | 2 | 7 | ... | ... | 69,940 | 21 | ... | ... | 21 | 453 | ... | ... | 453 | 474 | |
| Bihar and Orissa | Singhbhum | 2 | ... | 2 | ... | ... | 30,140 | 158 | 208 | 29 | 395 | 28 | ... | ... | 28 | 423 | |
| | GRAND TOTAL (CHROMITE) FOR 1916. | 11 | 2 | 9 | .. | ... | 100,080 | 179 | 208 | 29 | 416 | 481 | ... | ... | 481 | 897 | |
| | TOTAL OF PRECEDING YEAR | 6 | 1 | 5 | ... | ... | 29,300 | 54 | ... | ... | 54 | 31 | ... | ... | 31 | 85 | |
| | DIFFERENCE | +5 | +1 | +4 | ... | ... | +70,780 | +125 | +208 | +29 | +362 | +450 | ... | ... | +150 | +812 | |

APPENDIX I—contd.

STATISTICS OF MINES AND MINERALS—contd.

Table No. 1—contd.

Number of mines regulated by the Indian Mines Act, 1901, number of workers and output of minerals, during the year 1916—contd.

| Province. | District and mineral field. | Number of mines under the scope of the Act. | NUMBER OF MINES. | | NUMBER OF MINES INSPECTED DURING THE YEAR. | | TOTAL OUTPUT. | AVERAGE NUMBER OF PERSONS EMPLOYED DAILY IN AND ABOUT THE MINES. | | | | | | | | |
|-------------------------|-------------------------------|---|-----------------------------|---------------------------------|--|------------------------|-----------------|--|----------------|----------------------|---------------------|---------------|----------------|----------------------|---------------------|-------------------------------------|
| | | | Worked by mechanical power. | Not worked by mechanical power. | Number of mines inspected. | Number of inspections. | | BELOW GROUND. | | | | ABOVE GROUND. | | | | Grand total below and above ground. |
| | | | | | | | | Adult males. | Adult females. | Children (under 12). | Total below ground. | Adult males. | Adult females. | Children (under 12). | Total above ground. | |
| M.—COPPER ORE. | | | | | | | | | | | | | | | | |
| Bihar and Orissa | Singhbhum | 2 | 1 | 1 | ... | ... | Tons. 2,173 | 168 | ... | ... | 168 | 569 | 183 | 42 | 794 | 962 |
| Burma | Katha | 1 | ... | 1 | ... | ... | 498 | 19 | ... | ... | 19 | 16 | ... | ... | 16 | 35 |
| | Kyaukse | 1 | ... | 1 | ... | ... | ... | 30 | ... | ... | 30 | 40 | 10 | ... | 50 | 80 |
| | Lower Chindwin | 2 | ... | 2 | ... | ... | ... | 128 | ... | ... | 128 | 35 | 5 | ... | 40 | 168 |
| | TOTAL | 4 | ... | 4 | ... | ... | 498 | 177 | ... | ... | 177 | 91 | 15 | ... | 106 | 283 |
| | GRAND TOTAL (COPPER) FOR 1916 | 6 | 1 | 5 | ... | ... | 2,671 | 345 | ... | ... | 345 | 680 | 198 | 42 | 900 | 1,245 |
| TOTAL OF PRECEDING YEAR | 5 | 1 | 4 | 1 | 5 | 8,010 | 714 | ... | ... | 714 | 975 | 157 | ... | 1,132 | 1,848 | |
| DIFFERENCE | +1 | ... | +1 | -1 | -5 | -5,339 | -369 | ... | ... | -369 | -315 | +41 | +42 | -232 | -601 | |
| N.—BAUXITE. | | | | | | | | | | | | | | | | |
| Central Provinces | Jabalpur | 1 | ... | 1 | 1 | 1 | Cwts. 15,000 | 15 | 17 | ... | 32 | 7 | ... | ... | 7 | 39 |
| | TOTAL OF PRECEDING YEAR | 1 | ... | 1 | ... | ... | 17,520 | 20 | 18 | ... | 38 | 3 | ... | ... | 3 | 41 |
| | DIFFERENCE | ... | ... | ... | +1 | +1 | -2,520 | -5 | -1 | ... | -6 | +4 | ... | ... | +4 | -2 |

| | | O.—CLAY. | | | | | Tons. | | | | | | | | | | | |
|-----------------------------------|-----------------------------------|------------|-----|-----|-----|-----|--------|-----|-----|-----|-----|------|------|------|--------|--------|--|--|
| Bihar and Orissa | Manblum | 3 | ... | 3 | ... | ... | 344 | 21 | 3 | ... | 24 | 26 | 12 | ... | 38 | 62 | | |
| | Palamau | 1 | ... | 1 | ... | ... | 1,084 | 5 | 4 | 1 | 10 | 9 | 10 | 2 | 21 | 31 | | |
| | TOTAL | 4 | ... | 4 | ... | ... | 2,278 | 26 | 7 | 1 | 34 | 35 | 22 | 2 | 59 | 93 | | |
| Central Provinces | Jabalpur | 7 | 1 | 6 | 4 | 4 | 30,625 | 93 | 138 | 13 | 244 | 35 | 6 | 3 | 44 | 288 | | |
| Delhi | Delhi | 1 | ... | 1 | ... | ... | 3,214 | ... | ... | ... | ... | ... | ... | ... | ... | ...* | | |
| GRAND TOTAL (CLAY) FOR 1916. | | 12 | 1 | 11 | 4 | 4 | 36,117 | 119 | 145 | 14 | 278 | 70 | 28 | 5 | 103 | 381 | | |
| TOTAL OF PRECEDING YEAR | | 6 | 1 | 5 | ... | ... | 32,428 | 91 | 155 | 8 | 254 | 61 | 24 | 5 | 90 | 344 | | |
| DIFFERENCE | | +6 | ... | +6 | +4 | +4 | +3,689 | +28 | -10 | +6 | +24 | +9 | +4 | - | +13 | +37 | | |
| | | P.—GALENA. | | | | | Cwts. | | | | | | | | | | | |
| Central Provinces | Drug | 1 | ... | 1 | ... | ... | 140 | 10 | 20 | ... | 30 | 2 | 25 | ... | 27 | 57 | | |
| | TOTAL OF PRECEDING YEAR | 1 | - | 1 | ... | ... | 140 | 5 | 20 | ... | 25 | 2 | 10 | ... | 12 | 37 | | |
| | DIFFERENCE | ... | ... | ... | ... | ... | ... | +5 | ... | ... | +5 | ... | +15 | ... | +15 | +20 | | |
| | | Q.—TIN. | | | | | Cwts. | | | | | | | | | | | |
| Bihar and Orissa | Hazaribagh | 1 | ... | 1 | ... | ... | ... | ... | - | ... | ... | 3 | ... | ... | 3 | 3 | | |
| Burma | Mergui | 1 | ... | 1 | ... | ... | 13 | ... | ... | ... | ... | 52 | ... | ... | 52 | 52 | | |
| | Tavoy | 3 | 1 | 2 | ... | ... | 844 | 70 | ... | ... | 70 | ... | ... | ... | ... | 70 | | |
| | Thaton | 1 | ... | 1 | ... | ... | 900 | ... | ... | ... | ... | 500 | 900 | 100 | 1,500 | 1,500 | | |
| | TOTAL | 5 | 1 | 4 | ... | ... | 1,757 | 70 | - | ... | 70 | 552 | 900 | 100 | 1,552 | 1,622 | | |
| | GRAND TOTAL (TIN) FOR 1916. | 6 | 1 | 5 | ... | ... | 1,757 | 70 | ... | ... | 70 | 555 | 900 | 100 | 1,555 | 1,625 | | |
| " " OF PRECEDING YEAR. | 5 | ... | 5 | ... | ... | 280 | 30 | 1 | ... | 31 | 2 | 1 | ... | 3 | 84 | | | |
| DIFFERENCE | | +1 | +1 | ... | ... | ... | +1,477 | +40 | -1 | ... | +39 | +553 | +899 | +100 | +1,552 | +1,591 | | |

* Labour figures received too late to be entered in the statistics.

APPENDIX I—contd.

STATISTICS OF MINES AND MINERALS—contd.

Table No. 1—contd.

Number of mines regulated by the Indian Mines Act, 1901, number of workers and output of minerals, during the year 1916—contd.

| PROVINCE. | District and mineral field. | Number of mines under the scope of the Act. | NUMBER OF MINES. | | NUMBER OF MINES INSPECTED DURING THE YEAR. | | TOTAL OUTPUT. | AVERAGE NUMBER OF PERSONS EMPLOYED DAILY IN AND ABOUT THE MINES. | | | | | | | | | |
|-------------------|-----------------------------------|---|-----------------------------|---------------------------------|--|------------------------|---------------|--|----------------|----------------------|---------------------|---------------|----------------|----------------------|---------------------|-------------------------------------|--|
| | | | Worked by mechanical power. | Not worked by mechanical power. | Number of mines inspected. | Number of inspections. | | BELOW GROUND. | | | | ABOVE GROUND. | | | | Grand total below and above ground. | |
| | | | | | | | | Adult males. | Adult females. | Children (under 12). | Total below ground. | Adult males. | Adult females. | Children (under 12). | Total above ground. | | |
| | | | | | R.—STEATITE. | | | | | | | | | | | | |
| | | | | | | | Cwts. | | | | | | | | | | |
| Central Provinces | Jabalpur | 5 | ... | 5 | 1 | 1 | 17,835 | 91 | 81 | 5 | 177 | 49 | 43 | 12 | 101 | 281 | |
| Madras | Kurnool | 1 | ... | 1 | ... | ... | 209 | 3 | 7 | ... | 10 | 5 | 2 | ... | 7 | 17 | |
| | GRAND TOTAL FOR 1916 | 6 | ... | 6 | 1 | 1 | 18,044 | 94 | 88 | 5 | 187 | 54 | 45 | 12 | 111 | 298 | |
| | " " OF PRECEDING YEAR. | 1 | ... | 1 | ... | ... | ... | ... | ... | ... | ... | 6 | 6 | ... | 12 | 12 | |
| | DIFFERENCE | +5 | ... | +5 | +1 | +1 | +18,044 | +94 | +88 | +5 | +187 | +48 | +39 | +12 | +99 | +286 | |
| | | | | | S.—FULLERS' EARTH. | | | | | | | | | | | | |
| | | | | | | | Tons. | | | | | | | | | | |
| Central Provinces | Jabalpur | 1 | ... | 1 | 1 | 1 | 179 | ... | ... | ... | ... | ... | ... | ... | ... | ... | |
| | TOTAL OF PRECEDING YEAR | 1 | ... | 1 | ... | — | 139 | ... | ... | ... | ... | ... | ... | ... | ... | ... | |
| | DIFFERENCE | ... | ... | ... | +1 | +1 | +40 | ... | ... | ... | ... | ... | ... | ... | ... | ... | |

* Labour figures included with those for Jabalpur limestone.

| | | | | | | | | | | | | | | | | | | |
|---------------------|-----------------------------------|-----|-----|------------------------|-----|---------|------|-----|-----|------|-----|-----|-----|-----|------|-----|-----|-----|
| | | | | T.—SILVER. | | | | | | | | | | | | | | |
| | | | | | | Oz. | | | | | | | | | | | | |
| Madras | Anantapur | ... | ... | ... | ... | 1,362 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | TOTAL OF PRECEDING YEAR | ... | ... | ... | ... | 512 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | DIFFERENCE | ... | ... | ... | ... | +850 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | | | | | | | | | | | | | | | | | |
| | | | | U.—GRAPHITE. | | | | | | | | | | | | | | |
| | | | | | | Cwts. | | | | | | | | | | | | |
| Rajputana | Ajmer-Merwara | 3 | ... | 3 | ... | 21,328 | 118 | 19 | ... | 137 | 11 | 4 | ... | 15 | 152 | | | |
| | TOTAL OF PRECEDING YEAR | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | DIFFERENCE | +3 | ... | +3 | ... | +21,328 | +118 | +19 | ... | +137 | +11 | +4 | ... | +15 | +152 | | | |
| | | | | | | | | | | | | | | | | | | |
| | | | | V.—MOLYBDENITE. | | | | | | | | | | | | | | |
| | | | | | | Cwts. | | | | | | | | | | | | |
| Burma | Tavoy | 2 | ... | 2 | ... | 8 | 10 | ... | ... | 10 | 5 | ... | ... | 5 | 15 | | | |
| | TOTAL OF PRECEDING YEAR | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | DIFFERENCE | +2 | ... | +2 | ... | +8 | +10 | ... | ... | +10 | +5 | ... | ... | +5 | +15 | | | |

* Won from Anantapur gold mines.

APPENDIX I—contd.

STATISTICS OF MINES AND MINERALS—concl'd.

Table No. 1—concl'd.

Number of mines regulated by the Indian Mines Act, 1901, number of workers and output of minerals, during the year 1916—concl'd.

| PROVINCE. | District and mineral field. | Number of mines under the scope of the Act. | NUMBER OF MINES. | | NUMBER OF MINES INSPECTED DURING THE YEAR. | | TOTAL OUTPUT. | AVERAGE NUMBER OF PERSONS EMPLOYED DAILY IN AND ABOUT THE MINES. | | | | | | | | | | |
|-----------------|-----------------------------------|---|-----------------------------|---------------------------------|--|------------------------|--|--|----------------|----------------------|---------------------|---------------|----------------|----------------------|---------------------|-------------------------------------|-----|-----|
| | | | Worked by mechanical power. | Not worked by mechanical power. | Number of mines inspected. | Number of inspections. | | BELOW GROUND. | | | | ABOVE GROUND. | | | | Grand total below and above ground. | | |
| | | | | | | | | Adult males. | Adult females. | Children (under 12). | Total below ground. | Adult males. | Adult females. | Children (under 12). | Total above ground. | | | |
| Burma | Thaton | 1 | ... | 1 | ... | ... | W. TITANIUM. | | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | TOTAL OF PRECEDING YEAR | ... | ... | ... | ... | ... | Tons. 2 | | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | DIFFERENCE | + 1 | ... | + 1 | ... | ... | + 2 | | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | GRAND TOTAL (ALL MINERALS) 1916. | 1,283 | 416 | 867 | 630 | 1,097 | Tons. 17,401,220 Cwts. 251,429 Carats. 209,724 Troy ounces. 24,597 | 77,990 | 46,704 | 2,595 | 127,289 | 46,780 | 20,151 | 3,699 | 70,630 | 197,919 | | |
| | GRAND TOTAL OF PRECEDING YEAR. | 1,121 | 368 | 753 | 503 | 969 | Tons. 17,124,855 Cwts. 110,734 lbs. 84 Carats. 251,449 Troy ounces. 24,832 | 73,119 | 43,033 | 1,865 | 118,017 | 39,668 | 19,063 | 3,340 | 62,071 | 180,088 | | |
| | DIFFERENCE | +162 | +48 | +114 | +127 | +128 | +276,365 Cwts. 140,695 Carats. 41,725 Troy ounces. 235 | +1,871 | +3,671 | +730 | +9,272 | +7,112 | +1,088 | +359 | +8,559 | +17,831 | | |

* Figures included with those of Thaton wolfram mines.

APPENDIX I—contd.

Table 2.

Analysis of figures relating to output of coal.

| Provinces. | District and mineral field. | OPENING STOCKS. | | RAISINGS. | | TOTAL. | | DESPATCHES. | | COLLIERY CONSUMPTION. | | COAL DELIVERED TO COKING. | | CLOSING STOCKS. | | COKE MADE. | |
|-------------|-----------------------------|-----------------|---------|-----------|---------|-----------|-----------|-------------|---------|-----------------------|---------|---------------------------|--------|-----------------|--------|------------|------------|
| | | Steam. | Slack. | Steam. | Slack. | Steam. | Slack. | Steam. | Slack. | Steam. | Slack. | Steam. | Slack. | Steam. | Slack. | Hard coke. | Soft coke. |
| | | Tons. | Tons. | Tons. | Tons. | Tons. | Tons. | Tons. | Tons. | Tons. | Tons. | Tons. | Tons. | Tons. | Tons. | Tons. | Tons. |
| Assam | Lakhimpur | ... | ... | 283,275 | 555 | 283,275 | 555 | 280,437 | 355 | 2,081 | ... | 467 | ... | 290 | 200 | 156 | ... |
| | Naga Hills | 3,650 | ... | 3,135 | ... | 6,785 | ... | ... | ... | ... | ... | ... | ... | 6,785 | ... | ... | ... |
| | TOTAL | 3,650 | ... | 286,410 | 555 | 290,060 | 555 | 280,437 | 355 | 2,081 | ... | 467 | ... | 7,075 | 200 | 156 | ... |
| Baluchistan | Kalat | ... | ... | 2,138 | 625 | 2,138 | 625 | 2,089 | 579 | ... | ... | ... | ... | 49 | 46 | ... | ... |
| | Loralai | 10 | ... | 87 | ... | 97 | ... | 97 | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | Quetta-Pishin | 140 | 488 | 458 | 5,860 | 598 | 6,348 | 410 | 5,550 | ... | ... | ... | ... | 188 | 798 | ... | ... |
| | Sibi-Khost | 421 | 1,371 | 10,659 | 22,336 | 11,080 | 23,707 | 10,886 | 19,046 | 126 | 4,263 | ... | ... | 68 | 398 | ... | ... |
| | TOTAL | 571 | 1,859 | 13,342 | 28,821 | 13,913 | 30,680 | 13,482 | 25,175 | 126 | 4,263 | ... | ... | 305 | 1,242 | ... | ... |
| Bengal | Bankura-Raniganj | 91 | 900 | 6,524 | 441 | 6,615 | 1,341 | 6,456 | 282 | 155 | 400 | 4 | ... | ... | 659 | ... | 3 |
| | Birbhum " | ... | ... | 1,675 | 380 | 1,675 | 380 | 1,675 | 61 | ... | 319 | ... | ... | ... | ... | ... | ... |
| | Burdwan " | 346,275 | 155,431 | 4,008,519 | 974,837 | 4,354,794 | 1,130,271 | 4,103,022 | 541,234 | 75,425 | 498,009 | 118,075 | 7,880 | 58,272 | 83,148 | 2,453 | 79,019 |
| | TOTAL | 346,366 | 156,334 | 1,016,718 | 975,658 | 4,363,084 | 1,131,992 | 4,111,154 | 541,577 | 75,580 | 498,728 | 118,079 | 7,880 | 58,272 | 83,607 | 2,453 | 79,022 |

APPENDIX I—contd.

Table 2—concl'd.

Analysis of figures relating to output of coal—concl'd.

| PROVINCE. | District and mineral field. | OPENING STOCKS | | RAINFALL | | TOTAL | | DISPATCHES. | | COLLIERY CONSUMPTION. | | COAL DELIVERED TO COKING. | | CLOSING STOCKS. | | COKE MADE. | | |
|-------------------------------|-----------------------------|----------------|------------|-----------|------------|-----------|------------|-------------|-----------|-----------------------|---------|---------------------------|---------|-----------------|---------|------------|------------|---------|
| | | Steam. | Slack. | Steam. | Slack. | Steam. | Slack. | Steam. | Slack. | Steam. | Slack. | Steam. | Slack. | Steam. | Slack. | Hard coke. | Soft coke. | |
| | | Tons. | Tons. | Tons. | Tons. | Tons. | Tons. | Tons. | Tons. | Tons. | Tons. | Tons. | Tons. | Tons. | Tons. | Tons. | Tons. | |
| Bihar and Orissa | Hazaribagh | Bokaro Ramgarh | 744 | 2,895 | 158,785 | 33,540 | 159,529 | 36,478 | 158,064 | 24,440 | 1,154 | 5,565 | ... | 4,505 | 311 | 1,968 | 501 | 3,012 |
| | | Giridih | 11,172 | 29,011 | 671,486 | 194,569 | 682,658 | 223,580 | 673,952 | 108,041 | 267 | 49,828 | ... | 56,211 | 8,439 | 9,600 | 39,677 | 859 |
| | | Jharia | 3,996 | 3,661 | 27,258 | 5,730 | 31,254 | 9,391 | 25,156 | 2,401 | 844 | 3,118 | 205 | ... | 5,049 | 3,872 | ... | 136 |
| | Manbhum | Jharia | 864,439 | 344,021 | 6,892,190 | 2,025,140 | 7,756,629 | 2,369,161 | 6,974,047 | 1,273,270 | 213,899 | 6,22,257 | 286,600 | 200,497 | 282,083 | 183,137 | 151,005 | 171,232 |
| | | Raniganj | 61,673 | 15,435 | 416,809 | 124,595 | 478,482 | 140,030 | 332,974 | 75,926 | 20,367 | 45,178 | 93,823 | 8,777 | 31,318 | 10,149 | ... | 69,911 |
| | Palamau-Daltonganj | 4,812 | 1,949 | 66,113 | 10,185 | 70,925 | 12,134 | 70,767 | 3,899 | ... | 7,722 | ... | ... | 158 | 513 | ... | ... | |
| | Sambalpur-Hingir Rampur | 740 | ... | 44,684 | 15,053 | 45,424 | 15,053 | 42,282 | 4,857 | 3,123 | 10,196 | ... | ... | 19 | ... | ... | ... | |
| | Santal-Parganas | Jainty | 10,049 | 1,816 | 62,856 | 11,662 | 72,905 | 13,478 | 71,630 | 866 | 1,079 | 10,340 | ... | ... | 196 | 2,272 | ... | ... |
| | | Raniganj | 26 | ... | 1,447 | 80 | 1,473 | 80 | 1,402 | 5 | 68 | ... | ... | ... | 5 | 75 | ... | ... |
| | | TOTAL | 957,651 | 398,731 | 8,341,628 | 2,420,594 | 9,299,279 | 2,819,385 | 8,350,274 | 1,493,705 | 240,799 | 754,204 | 380,628 | 359,990 | 327,578 | 211,486 | 191,183 | 245,150 |
| Central Provinces | Chanda | ... | 13 | 61,391 | 23,498 | 61,391 | 23,511 | 60,686 | 11,736 | 610 | 11,463 | ... | ... | 95 | 312 | ... | ... | |
| | Chhindwara | 3,625 | 433 | 117,009 | 37,449 | 120,724 | 37,842 | 120,257 | 19,610 | ... | 17,412 | ... | ... | 467 | 860 | ... | ... | |
| | Narsinghpur | 1,183 | ... | 43,578 | 4,817 | 44,761 | 4,817 | 30,428 | ... | 13,548 | 4,817 | ... | ... | 785 | ... | ... | ... | |
| | TOTAL | 4,808 | 446 | 222,068 | 65,764 | 226,876 | 66,210 | 211,371 | 31,346 | 14,158 | 33,692 | ... | ... | 1,347 | 1,172 | ... | ... | |
| North-West Frontier Province. | Hazara | ... | ... | ... | 75 | ... | 75 | ... | 75 | ... | ... | ... | ... | ... | ... | ... | ... | |
| Panjab | Jhelum | ... | 1,845 | 2,426 | 42,518 | 2,426 | 44,363 | 2,418 | 40,748 | ... | 1,554 | ... | ... | 8 | 2,061 | ... | ... | |
| | Mianwali | ... | ... | 25 | 792 | 25 | 792 | 25 | 360 | ... | ... | ... | ... | ... | 412 | ... | ... | |
| | Shahpur | ... | ... | ... | 1,688 | ... | 1,688 | ... | 720 | ... | 70 | ... | ... | ... | 898 | ... | ... | |
| | TOTAL | ... | 1,845 | 2,451 | 44,938 | 2,451 | 46,843 | 2,443 | 41,848 | ... | 1,624 | ... | ... | 8 | 3,371 | ... | ... | |
| GRAND TOTAL | 1,313,016 | 559,275 | 12,882,617 | 8,536,465 | 14,195,663 | 4,095,740 | 12,969,160 | 2,134,081 | 332,744 | 1,292,511 | 499,174 | 367,870 | 394,585 | 301,278 | 193,792 | 324,172 | | |

APPENDIX I—*contd.*

Table No. 3.
Number of mines opened and closed during the year ending 31st
December 1916.

| Province. | District. | Number of mines opened. | Number of mines closed. | |
|--------------------------------------|----------------------------|--------------------------|-------------------------|----|
| A.—COAL. | | | | |
| BALUCHISTAN | Kalat | 2 | ... | |
| | Quetta-Pishin | 2 | ... | |
| | Sibi-Khost | 1 | 1 | |
| TOTAL | | 5 | 1 | |
| BENGAL | Burdwan-Raniganj | 14 | 8 | |
| BIHAR AND ORISSA | Hazaribagh { | Bokaro-Ramgarh | 4 | 2 |
| | | Giridih | 2 | 2 |
| | Manbhum { | Jharia | ... | 2 |
| | | Jharia | 21 | 11 |
| | | Raniganj | 8 | 6 |
| Sonthal Parganas, Raniganj | | 2 | 1 | |
| TOTAL | | 37 | 24 | |
| CENTRAL PROVINCES | Chanda | ... | 1 | |
| TOTAL (COAL) | | 56 | 34 | |
| B.—MICA. | | | | |
| BIHAR AND ORISSA | Bhagalpur | 1 | ... | |
| | Gaya | 13 | 3 | |
| | Hazaribagh | 104 | 38 | |
| | Monghyr | 1 | 4 | |
| TOTAL | | 119 | 45 | |
| MADRAS | Nellore | 33 | 20 | |
| | Salem | 1 | ... | |
| TOTAL | | 34 | 20 | |
| RAJPUTANA | Ajmer-Merwara | 4 | ... | |
| TOTAL (MICA) | | 157 | 65 | |

APPENDIX I—*contd.*

Table No. 3—*contd.*
 Number of mines opened and closed during the year ending 31st
 December 1916—*contd.*

| Province. | District. | Number of mines opened. | Number of mines closed. |
|-----------------------------|-----------------------|-------------------------|-------------------------|
| C.—MANGANESE. | | | |
| CENTRAL PROVINCES . . . | Balaghat | 2 | ... |
| | Bhandara | 4 | 1 |
| | Nagpur | 3 | 1 |
| TOTAL | | 9 | 2 |
| MADRAS | Vizagapatam | 3 | 1 |
| TOTAL (MANGANESE) | ... | 12 | 3 |
| D.—LIMESTONE. | | | |
| CENTRAL PROVINCES | Jabalpur | 8 | 17 |
| PANJAB | Hoshiarpur | 1 | ... |
| TOTAL (LIMESTONE) | ... | 9 | 17 |
| E.—SLATE. | | | |
| BIHAR AND ORISSA | Monghyr | ... | 1 |
| F.—IRON ORE. | | | |
| CENTRAL PROVINCES | Jabalpur | 1 | 1 |
| G.—WOLFRAM. | | | |
| BIHAR AND ORISSA | Singhbhum | 1 | ... |
| BURMA | Tavoy | 54 | 10 |
| | Thaton | 7 | 2 |
| TOTAL | | 61 | 12 |
| CENTRAL PROVINCES | Nagpur | 1 | 1 |
| TOTAL (WOLFRAM) | ... | 63 | 13 |

APPENDIX I—*concl.*

Table No. 3—*concl.*
 Number of mines opened and closed during the year ending 31st
 December 1916—*concl.*

| Province. | District. | Number of mines opened. | Number of mines closed. |
|-----------------------------------|--------------------------|-------------------------|-------------------------|
| H.—CHROMITE. | | | |
| BALUCHISTAN | Quetta-Pishin | 1 | ... |
| BIHAR AND ORISSA | Singhbhum | 2 | ... |
| TOTAL (CHROMITE) | | 3 | ... |
| I.—COPPER. | | | |
| BURMA | Katha | ... | 1 |
| | Lower Chindwin | ... | 2 |
| TOTAL (COPPER) | | ... | 3 |
| J.—CLAY. | | | |
| BIHAR AND ORISSA | Manbhum | 1 | 2 |
| CENTRAL PROVINCES | Jabalpur | 1 | ... |
| TOTAL (CLAY) | | 2 | 2 |
| K.—GALENA. | | | |
| CENTRAL PROVINCES | Drug | 1 | 1 |
| L.—TIN. | | | |
| BURMA | Mergui | 1 | ... |
| | Tavoy | 1 | ... |
| | Thaton | 1 | ... |
| TOTAL (TIN) | | 3 | ... |
| M.—STEATITE. | | | |
| CENTRAL PROVINCES | Jabalpur | 2 | 1 |
| N.—GRAPHITE. | | | |
| RAJPUTANA | Ajmer-Merwara | 2 | ... |
| GRAND TOTAL (ALL MINES) | | 311 | 141 |

APPENDIX I—*concl.*

Table No. 4.

The following table shows the fluctuations in the output of the principal minerals raised from mines classed under the Indian Mines Act, 1901. The other minerals raised are gems, slate, iron ore, magnesite, chromite, tin, steatite, clay, galena, bauxite, fuller's earth, silver, graphite, molybdenite and titanium.

| YEAR. | Coal. | Manganese. | Mica. | Limestone. | Salt. | Wolfram. | Gold. | Copper ore. |
|------------|------------|------------|--------|------------|---------|----------|-----------|-------------|
| | Tons. | Tons. | Cwts. | Tons. | Tons. | Cwts. | Troy ozs. | Tons. |
| 1907 . . . | 10,526,468 | 642,082 | 44,919 | 73,222 | 101,703 | ... | 4,017 | ... |
| 1908 . . . | 12,149,020 | 494,942 | 46,208 | 101,569 | 93,779 | ... | 7,242 | 10 |
| 1909 . . . | 11,294,227 | 357,203 | 32,011 | 56,502 | 126,987 | 144 | 5,615 | 7 |
| 1910 . . . | 11,387,716 | 468,669 | 21,375 | 81,258 | 119,867 | 18 | 3,269 | 864 |
| 1911 . . . | 12,048,726 | 441,426 | 31,686 | 92,692 | 124,603 | £,394 | 8,277 | 2,079 |
| 1912 . . . | 14,044,368 | 423,464 | 41,660 | 91,784 | 131,233 | 25,401 | 7,269 | 8,984 |
| 1913 . . . | 15,486,318 | 637,391 | 43,650 | 71,259 | 138,540 | 27,520 | 11,019 | 3,639 |
| 1914 . . . | 15,727,631 | 555,672 | 38,189 | 146,505 | 135,518 | 31,526 | 19,873 | 4,400 |
| 1915 . . . | 16,352,480 | 378,172 | 24,063 | 64,179 | 144,770 | 39,432 | 24,320 | 8,010 |
| 1916 . . . | 16,419,082 | 568,932 | 35,978 | 45,290 | 180,357 | 59,094 | 23,235 | 2,671 |

Table No. 5.

The following table shows the amount of coal raised, the average number of persons working daily and the death-rates during the years 1907 to 1916 in respect of coal mines under the Indian Mines Act, 1901 :—

| YEAR. | Amount of coal raised. | Average number of persons working daily below and above ground. | Number of deaths below and above ground. | DEATH-RATES. | |
|------------|------------------------|---|--|----------------------------|---|
| | | | | Per 1,000,000 tons raised. | Per 1,000 persons working daily below and above ground. |
| 1907 . . . | 10,526,468 | 102,689 | 89 | 8.45 | .86 |
| 1908 . . . | 12,149,020 | 120,107 | 164 | 13.49 | 1.36 |
| 1909 . . . | 11,294,227 | 109,291 | 119 | 10.53 | 1.08 |
| 1910 . . . | 11,387,716 | 105,285 | 160 | 14.05 | 1.52 |
| 1911 . . . | 12,048,726 | 106,698 | 148 | 12.28 | 1.38 |
| 1912 . . . | 14,044,368 | 121,392 | 157 | 11.17 | 1.29 |
| 1913 . . . | 15,486,318 | 133,042 | 185 | 11.95 | 1.39 |
| 1914 . . . | 15,727,631 | 137,851 | 145 | 9.22 | 1.05 |
| 1915 . . . | 16,352,480 | 145,537 | 166 | 10.15 | 1.14 |
| 1916 . . . | 16,419,082 | 143,459 | 169 | 10.29 | 1.18 |

APPENDIX II.
ACCIDENTS IN MINES.

Table No. 1.
List of Fatal Accidents in mines regulated by the Indian Mines Act, 1901, during the year 1916.

| 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 wrought. | Cause of accident and remarks. |
|---|----------------------------|--|--------------------------------------|--|--------------------------|---|
| EXPLOSIONS OF FIRE DAMP—(14 deaths). | | | | | | |
| 1 | 20th July, 10 A.M. | Dishergarh Mine, Dishergarh P. O., Bengal. | Equitable Coal Co., Ltd. | Rupai Manjhi, (m.), 28, <i>Haulage attendant.</i> Nagra Manjhi, (m.), 14, <i>Coal-cutter.</i> Dhania Muchi, (m.), 23, <i>Propping carpenter's coolie.</i> Dayal Muchi, (m.), 27, <i>Propping carpenter.</i> Jogai Chamar, (m.), 29, Nania Muchi, (m.), 25, Dashu Muchi, (m.), 24, <i>Propping carpenter's coolies.</i> Bhagal Chamar, (m.), 23, <i>Propping carpenter.</i> Dharna Dubey, (m.), 20, Shunker Dubey, (m.), 30, Niaman Singh, (m.), 23, <i>Propping carpenter's coolies.</i> Dukhi Manjhian, (f.), 25, <i>Coal-carrier.</i> Sarka Manjhi, (m.), 27, Narayan Manjhi, (m.), 38, <i>Coal-cutters.</i> | Coal | While work was going on in a pillar-cutting district a noise of falling stone was heard in the "goaf." This was followed shortly afterwards by an explosion by which eighteen persons were burnt of which the fourteen deceased succumbed to their injuries. Inspection and inquiry made. <i>See Report, page 6.</i> |
| FALLS OF ROOF AND SIDES—(81 deaths). | | | | | | |
| (a) Falls of roof—(46 deaths). | | | | | | |
| 2 | 7th January, 1-30 P.M. | West Ledo Mine, Margherita P. O., Assam. | Assam Railways and Trading Co., Ltd. | Banka Bengali, (m.), 26, <i>Coal shoveller.</i> | Coal | Timbermen were putting in new bars at a point about 30 feet above the bottom of a self-acting incline, on a slope of 1 in 2. Deceased was 5 feet above the bottom of the slope and was shovelling coal, which had fallen from the roof before during repairing operations. Whilst they were so employed, coal fell from the side at a point 15 feet above the timbermen. Three large lumps rolled down the steep slope and struck deceased, killing him on the spot. Inspection and inquiry made. |

APPENDIX II—contd.

Fatal Accidents, 1916—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 wrought. | Cause of accident and remarks. |
|---------------------------------------|-----------------------------|---|-----------------------------------|---|--------------------------|---|
| FALLS OF ROOF AND SIDES—contd. | | | | | | |
| (a) Falls of roof—contd. | | | | | | |
| 3 | 7th January, 7 P.M. | Kendwadih Mine, Jamadoba P. O., Bihar and Orissa. | Hariladiah Coal Co., Ld. | Chaiti Bilaspuri, (f.), 27, Coal-carrier. | Coal | Whilst deceased was loading a basket at the face in a pillar-cutting district, about half a ton of overhanging coal fell upon her from a height of 5 feet. She was killed on the spot. Inspection and inquiry made. |
| 4 | 8th January, 11-30 A.M. | Kurhurbari Mine, Giridih P. O., Bihar and Orissa. | East Indian Railway Co. | Rakhni Rajwarin, (f.), 17, Rukni Rajwarin, (f.), 16, Coal-carriers. | Coal | Roof coal, measuring 5' × 2'-9" × 1'-3" thick, fell from a height of 8 feet from a smooth "parting" in a gallery, and killed deceased outright. This coal had recently been exposed by dressing the side of the gallery. Inspection and inquiry made. |
| 5 | 19th January, 5-30 P.M. | Namdang Mine, Margherita P. O., Assam. | Assam Railways & Trading Co., Ld. | Ganga Din Passi, (m.), 35, Coal-cutter. | Coal | Deceased and another miner, under the personal supervision of the European manager of the mine, were engaged in cutting down loose clay from the roof of an underground excavation, where a pump room was being made. A mass of nearly a ton of clay fell prematurely from "slips" in the roof. Deceased sustained injuries to which he succumbed on the following day. The manager had a narrow escape. Inspection and inquiry made. |
| 6 | 20th January, 4-30 P.M. | Lutchipur Mine, Sitarampur P. O., Bengal. | Lutchipur Coal Co., Ld. | Jogdeo Bhar, (m.), 34, Carpenter. | Coal | Deceased entered a disused road against orders and drew some props from beneath a tender roof. In attempting to recover the bunter, a piece of roof stone, measuring 5' × 5' × 1'-9", fell from a height of 4½ feet and killed him outright. Inspection and inquiry made. |
| 7 | 25th January, 11 A.M. | Lutchipur Mine, Sitarampur P. O., Bengal. | Damuda Coal Co., Ld. | Roghbir Ahir, (m.), 28, Deputy overman. | Coal | Deceased and the head overman were standing at the edge of a "goaf," from which the timber had recently been drawn, listening for any movement of the roof, when a sudden collapse of the roof occurred, apparently without warning, killing the former outright and slightly injuring the latter. Inspection and inquiry made. |
| 8 | 26th January, 10-30 P.M. | Ghusik Mine, Kalipahari P. O., Bengal. | Ghusik and Muslia Collieries, Ld. | Khepa Manjhi, (m.), 19, Miner. Sukhi Manjhian, (f.), 33, Coal-carrier. | Coal | A fall of roof, measuring 22' × 8' × 1'-7" thick, fell from a height of 8 feet in a gallery and killed the two deceased outright. Another person was injured. The place was affected by "slips" and "joints" and was known to be dangerous. Precautions were taken but they proved to be inadequate. Inspection and inquiry made. |
| 9 | 5th February, 5-30 P.M. | Kalikapur Mine, Bankulia P. O., Bengal. | R. M. Banerji & others | Mukundo Bauri, (m.), 35, Miner. | Coal | Deceased and his brother entered a fenced gallery to rob coal. While cutting the corner of a pillar, some roof coal, measuring 4' × 2' × 1'-3" thick, fell from a height of 6½ feet upon them killing deceased outright and fracturing the right leg of his brother. Inspection and inquiry made. |

| | | | | | | |
|----|-----------------------------|---|--------------------------------------|--|------|---|
| 10 | 17th February, 6 A.M. | Viceroy Mine, Charanpur P. O., Bengal. | Minto Coal Co., Ltd. | Hiru Chamar, (m.), 28, <i>Miner.</i> Padum Manjhian, (f.), 14, <i>Coal-carrier.</i> | Coal | Some roof coal, measuring 10' x 2'-0" x 2'-4" thick, fell upon the two deceased from a height of 13½ feet and inflicted injuries from the effects of which the man died half an hour later and the woman two days later. The overman was prosecuted by the management for breach of special rules and was fined Rs. 30 or three weeks' simple imprisonment. Inspection and inquiry made. |
| 11 | 17th February, 4-30 P.M. | Jogta Mine, Sijua P. O., Bihar and Orissa. | Agabeg Brothers | Mohi Rai, (m.), 65, <i>Coal-cutter.</i> | Coal | Whilst cutting side coal in a gallery, 13 feet wide by 7½ feet high, deceased was killed by a fall of about 2 cwts. of coal and clay band, which fell from a "slip". Inspection and inquiry made. |
| 12 | 21st February, 8-45 P.M. | Jamuria Mine, Nandi P. O., Bengal. | Equitable Coal Co., Ltd. | Sukru Mahato, (m.), 25, Bhola Mahato, (m.), 35, <i>Miners.</i> | Coal | The two deceased and a companion had just commenced work on two small pillars at a goaf edge in a pillar cutting district, when a mass of roof, measuring 150' x 75' x 12' thick, fell. The pillar at which Sukru was at work was crushed out. Bhola was struck by a falling prop. Both were killed instantly. The other man escaped with a slight cut on one of his feet. Inspection and inquiry made. |
| 13 | 4th March, 3-30 P.M. | Bulliar Mine, Kustore P. O., Bihar and Orissa. | East Indian Coal Co., Ltd. | Chetan Gope, (m.), 40, <i>Coal-cutter.</i> | Coal | Deceased was employed in a pillar-cutting district. He left his appointed working place, broke down a fence and began to cut coal near the edge of a "goaf." He was struck by a fall of about 1½ tons of coal, which fell from converging "slips" in the roof, 7 feet above. He died within an hour. Inspection and inquiry made. |
| 14 | 5th March, 12-30 A.M. | Jamuria Mine, Nandi P. O., Bengal. | Equitable Coal Co., Ltd. | Lharan Manjhi, (m.), 24, <i>Miner.</i> | Coal | Deceased, against the orders of the sirdar and in his absence, began to cut some top coal, when several pieces of stone and coal fell upon him. He was found lying under a piece of stone, measuring 5' x 3' x 1' tapering to feather edges, with the ribs of his right side fractured. He died shortly afterwards from shock. Inspection and inquiry made. |
| 15 | 6th March, 10-30 A.M. | Tikak Mine, Margherita P. O., Assam. | Assam Railways and Trading Co., Ltd. | Sorju Lohar, (m.), 26, <i>Loader.</i> | Coal | Deceased was struck by about 30 cwts of coal, which fell from the roof of an opening, 27' x 30' in area. He sustained serious injuries to his head and died twenty-four hours later. Inspection and inquiry made. |
| 16 | 13th March, 12-30 P.M. | Serampur Mine, Girdih P. O., Bihar and Orissa. | East Indian Railway Co. | Chota Bulahi Meah, (m.), 45, <i>Deputy overman.</i> | Coal | Deceased was assisting the overman to draw timbers, prior to dropping roof coal, about 40' x 40' x 27' thick. A portion of the coal, measuring about 12' x 12' x 27' thick, came away suddenly and buried him. He was killed outright. Inspection and inquiry made. |
| 17 | 26th March, 1 P.M. | Kendwadih Mine, Jamadoba P. O., Bihar and Orissa. | Hariladah Coal Co., Ltd. | Jahani Kewat, (m.), 30, <i>Coal-cutter.</i> | Coal | In a pillar-cutting district in a coal seam 9 feet thick, a pillar, originally 45 feet square, had been split up into four "stooks," each 16 feet square. A gang of seven miners were engaged in extracting the last portion of one of these "stooks." They had reduced its dimensions to 4' x 2'-6" when it collapsed, and a slab of stone, 10' x 5' x 1', fell from the roof, knocking out several of the thirty props set. Deceased was killed on the spot. Two other men were slightly injured, one of them being pinned down by the fallen stone. Inspection and inquiry made. |
| 18 | 30th March, 5 P.M. | Serampur Mine, Girdih P. O., Bihar and Orissa. | East Indian Railway Co. | Kella Mallah, (m.), 30, <i>Coal-cutter.</i> | Coal | When putting shot holes in a "knob" of coal supporting some roof coal, a piece of dyke stone, weighing about 3 cwts., fell upon deceased, as he was trying to escape. He died from the effects of his injuries an hour and a half later. Inspection and inquiry made. |

APPENDIX II—*contd.*

Fatal Accidents, 1916—*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 wrought. | Cause of accident and remarks. |
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| FALLS OF ROOF AND SIDES—<i>contd.</i> | | | | | | |
| <i>(a) Falls of roof—<i>concl'd.</i></i> | | | | | | |
| 19 | 25th May, 1 P.M. | Angarpatra Mine, Katrasgarh P. O., Bihar and Orissa. | Angarpatra Colliery Co. . | Ram Lal Bhuia, (m.), 35, <i>Coal cutter.</i> | Coal | Deceased entered a fenced gallery in a coal seam 6 feet thick and began to rob coal from the side. Whilst so engaged a triangular shaped area of roof shale, 13' x 7' x 2' thick, fell from between two "slips." He was killed on the spot. Inspection and inquiry made. |
| 20 | 1st June, 5 P.M. | Jairamdanga Mine, Asansol P. O., Bihar and Orissa. | New Beerbhun Coal Co., Ld. | Ganga Dayal Passi, (m.), 35, <i>Coal-cutter.</i> | Coal | Deceased went into a fenced off gallery to rob roof coal. Whilst so engaged, a mass, weighing about 80 lbs., fell upon him from a height of 15 feet. He died six hours later. Inspection and inquiry made. |
| 21 | 6th June, 10 P.M. | Lodna Mine, Jharia P. O., Bihar and Orissa. | Lodna Colliery Co., Ld. . | Manu Bhakta, (m.), 22, <i>Coal cutter.</i> Gurdayal Bhakta, (m.), 12, Jitni Bhaktin, (f.), 18, <i>Coal carriers.</i> | Coal | Whilst the three deceased were cutting coal in a gallery, 8 to 12 feet high and 10 feet wide, a mass of shale, 39' x 7' x 3' thick, fell upon them from the roof. Manu and Jitni were killed instantly and Gurdayal's injuries were such that he died eight hours later. Two other persons were slightly injured. Inspection and inquiry made. |
| 22 | 29th June, 1 A.M. | Faridpur Mine, Charanpur P. O., Bengal. | Poniaty Coal Concern . | Naku Kole, (m.), 22, <i>Coal-cutter.</i> | Coal | Deceased, in the legitimate absence of the sirdar, went behind a fence to cut roof coal in a gallery. Whilst so doing, a piece of stone, weighing about 100 lbs., fell upon him from a height of 8 feet. He died twenty-six hours later. Inspection and inquiry made. |
| 23 | 10th July, 11-30 P.M. | West Ledo Mine, Margherita P. O., Assam. | Assam Railways and Trading Co., Ld. . | Ghambir Koiri, (m.), 35, <i>Loader.</i> | Coal | Deceased was loading baskets inside the opening, when about 8 tons of coal fell without warning from a height of 16 feet and struck him, causing severe injuries. He died three and a half months later. Inspection and inquiry made. |
| 24 | 26th July, 4 P.M. | Kapasara Mine, Mugna P. O., Bihar and Orissa. | Jafar Yusuf & Sons . | Kashi Kora, (m.), 18, <i>Coal-cutter.</i> | Coal | Deceased went through a fence and started to rob a pillar. A mass of overhanging coal, measuring 19' long x 5'-6" broad x 5' thick, fell upon him and killed him instantly. Inspection and inquiry made. |
| 25 | 3rd August, 6-30 A.M. | Serampur Mine, Giridih P. O., Bihar and Orissa. | East Indian Railway Co. . | Mojidan Johlin, (f.), 15, <i>Coal-carrier.</i> | Coal | Five women were employed in a pillar extraction area. They passed through a fence and whilst they were loading coal, a fall of roof shale, 10' x 10' x 9", occurred. Mojidan received internal injuries and died the same day. Another woman sustained fractures of the ribs and collar bone. Inspection and inquiry made. |
| 26 | 19th August, 3-30 P.M. | Lakorka Mine, Katrasgarh P. O., Bihar and Orissa. | Lakorka Coal Co., Ld. . | Jagannath Koiri, (m.), 43, <i>Sirdar.</i> Bharun Bhuia, (m.), 19, <i>Coal-cutter.</i> | Coal | In a pillar-cutting district a pillar had been reduced to a "knob," 6' x 3'-6", when the roof began to "weight." The sirdar withdrew the miners and took out about 30 props. After a while, as the roof did not fall, he reset several props near the "knob" and set two coal-cutters to work to further reduce the "knob." Whilst so engaged, roof stone, 12' thick, fell over an area, 25' x 30', from which props had been removed. At the same time the same thickness of roof stone fell over an area, about |

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| 27 | 23rd September, 12 Noon. | Khost Mine, Khost P. O., Baluchistan. | North-Western Railway | Ram Sarup, (m.), 25, <i>Carpenter's coolie.</i> | Coal | Deceased, another coolie and a carpenter were timbering the face of a level when a large fall of coal occurred burying deceased, whose body was recovered six days afterwards. |
| 28 | 26th September, 8 A.M. | Central Dhurmaband Mine, Katrasgarh P. O., Bihar and Orissa. | Central Dhurmaband Coal Co., Ltd. | Luchmi Burhi, (m.), 35, <i>Carpenter-mistri.</i> | Coal | Deceased was drawing timber in a "goaf" when a mass of roof coal, measuring approximately 12' square and 9' thick, fell without any warning. He was struck down and buried under the fall. Death must have been instantaneous. Inspection and inquiry made. |
| 29 | 26th September, 2 P.M. | South Kustore Mine, Kustore P. O., Bihar and Orissa. | Raniganj Coal Association, Ltd. | Kachari Roy, (m.), 34, <i>Coal-cutter.</i> | Coal | Deceased had opened a fence and was robbing the corner of a pillar. A mass of coal, measuring 12' x 1' x 1'-6", fell from a height of 9 feet and killed him instantly. Inspection and inquiry made. |
| 30 | 11th October, 12 Noon. | East Chandrabad Mine, Jharia P. O., Bihar and Orissa. | Ruplal Agarwala | Babi Bauri, (f.), 25, <i>Coal-carrier.</i> | Coal | Deceased went through a fence into a disused gallery. A fall of roof occurred and a piece of stone, measuring 2'-10" x 2'-0" x 6", fell upon her from a height of 6 feet. She sustained a broken spine and injuries to her skull. Death was instantaneous. Inspection and inquiry made. |
| 31 | 18th October, 8-30 A.M. | Khas Jharia Mine, Jharia P. O., Bihar and Orissa. | Ramjus Agarwala | Sarna Munda, (f.), 14, <i>Coal-carrier.</i> | Coal | Deceased walked under some overhanging coal, which was being undercut by a miner. A piece, measuring 2'-6" x 1'-8" x 1'-5", broke away and fell from a height of 6 feet upon her. She sustained injuries to her spine and died in less than an hour. Inspection and inquiry made. |
| 32 | 18th October, 5-30 P.M. | Jharia Khas Mine, Jharia P. O., Bihar and Orissa. | Standard Coal Co., Ltd. | Sew Charan Passi, (m.), 45, <i>Coal-cutter.</i> | Coal | A mass of roof coal, weighing about 5 cwts., fell from a height of 25 feet on to the base of a pillar in course of extraction. It broke into small pieces, one of which struck deceased, who was sitting some distance away. He sustained injuries to his spine from which he died on the 24th December. Inspection and inquiry made. |
| 33 | 19th October, 11-30 A.M. | New Sinidih Mine, Katrasgarh P. O., Bihar and Orissa. | New Sinidih Coal Co., Ltd. | Butto Napit, (m.), 35, <i>Propping carpenter's coolie.</i> | Coal | A portion of soft ground, 30 feet inside the entrance of an incline, was being timbered. Deceased was making a hole in the side for a cross timber, when the roof suddenly caved in and buried him. Death was due to suffocation. Inspection and inquiry made. |
| 34 | 19th October 2-30 P.M. | Kurhurburi Mine, Giridih P. O., Bihar and Orissa. | East Indian Railway Co. | Tipon Burhi, (m.), 25, <i>Coal-cutter.</i> | Coal | Deceased was loading coal in a gallery in which roof coal was being cut. Whilst so doing, a piece of coal, measuring 2'-6" x 2'-9", fell upon him from a height of 7 feet. He was killed instantly. Inspection and inquiry made. |
| 35 | 8th November, 5 P.M. | Lower Joyrampur Mine, Jharia P. O., Bihar and Orissa. | Ghelabhai Panchan & Co. | Polu Bauri, (m.), 35, <i>Coal-cutter.</i> | Coal | Whilst deceased was cutting roof coal in a gallery, a slab of stone, measuring 5' x 5' x 6" thick, fell from the roof, 11 feet above. He sustained injuries to which he succumbed an hour later. Inspection and inquiry made. |
| 36 | 30th November, 9-45 P.M. | Sijua Mine, Sijua P. O., Bihar and Orissa. | Sijua Coal Co., Ltd. | Mangra Manjhi, (m.), 40, <i>Coal-cutter.</i> | Coal | Deceased was employed in splitting a pillar in a seam 9 feet thick. He went through a fence and began to cut coal from the corner of another pillar. Almost immediately an area of roof stone, 17' x 10' x 8" thick, fell upon him. His skull was fractured and he died about an hour later. Inspection and inquiry made. |
| 37 | 9th December, 8-45 P.M. | Jamuria Mine, Nandi P. O., Bengal. | Equitable Coal Co., Ltd. | Dayal Meah, (m.), 24, Puna Meah, (m.), 25, Budhan Koiri, (m.), 30, Etwari Kole, (m.), 24, <i>Coal-cutters.</i> | Coal | Whilst engaged in loading fallen roof coal on the edge of a "goaf," the deceased were killed by a fall of roof stone which fell over a considerable area which could not be measured and which was 7 feet in thickness. Inspection and inquiry made. See Report, page 8. |

APPENDIX II—contd.

Fatal Accidents, 1916—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 wrought. | Cause of accident and remarks. |
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| FALLS OF ROOF AND SIDES—contd. | | | | | | |
| <i>(b) Falls of side—(31 deaths).</i> | | | | | | |
| 38 | 4th January, 12 Midnight. | Satikdih Mine, Bhujndih P. O., Bihar and Orissa. | Satikdih Coal Co., Ld. | Baiju Rajwar, (m.), 30, <i>Coal-cutter.</i> | Coal | Deceased was employed in cutting floor coal in a gallery 15 feet high in a seam 26 feet thick. Against orders he undercut the side of a pillar and was killed on the spot by the fall of 1½ tons of coal. Inspection and inquiry made. |
| 39 | 7th January, 11 A.M. | Borrea Mine, Sitarampur P. O., Bengal. | New Beerbhun Coal Co., Ld. | Bhutka Manjhi, (m.), 30, <i>Miner.</i> | Coal | Deceased was robbing coal from a pillar, situated in a fenced area, when a piece of overhanging coal, measuring 18' x 6' x 3'-6" thick, fell from a height of 12½ feet and killed him outright. Inspection and inquiry made. |
| 40 | 11th January, 6 P.M. | New Suratar Mine, Jharia P. O., Bihar and Orissa. | New Suratar Coal Co., Ld. | Cheta Mallick, (m.), 55, <i>Sirdar.</i> | Coal | Whilst testing the stability of the side of a gallery by sounding it with a stick, a lump of coal, about 80 lbs. in weight, fell upon his shoulder from a height of 8 feet. He sustained a fracture of the collar bone and internal injuries, and, although he was able to walk out of the mine, he died two and a half hours later. Inspection and inquiry made. |
| 41 | 30th January, 11-30 A.M. | Hermyingyi Mine, Tavoy P. O., Burma. | Hermyingyi Mining Co., Ld. | Yi Mong, (m.), 30, <i>Miner.</i> | Wolfram | Deceased was buried under several tons of earth, which fell from the side of an "open cut," and was killed instantly. |
| 42 | 9th February, 1-10 P.M. | Paungdaw Mine, Tavoy P. O., Burma. | Martin and de Paulsen | Li Fook, (m.), 48, <i>Miner.</i> | Wolfram | As deceased was undermining the side of an "open cut" about two cubic yards of schist fell from the side, from a height of about 5 feet and killed him. <i>See Report, page 9.</i> |
| 43 | 15th February, 10-30 A.M. | Bansdeopur Mine, Kusunda P. O., Bihar and Orissa. | Bansdeopur Coal Co., Ld. | Jhalua Chamar, (m.), 30, <i>Coal-cutter.</i> | Coal | Deceased and three other miners were employed in splitting a pillar 19 feet high in a pillar-cutting district. The European assistant and the sirdar found their working place unsafe on account of unsound side coal and sent them out with instruction to work on floor coal in another gallery. Pending repairs the place was fenced. Deceased broke down the fence and entered the place. Whilst he was working there, he was killed on the spot by the fall of a slab of coal from the side, 9' x 5' x 0' to 2' thick, from a height of 12 feet. Inspection and inquiry made. |
| 44 | 15th February, 12 Noon. | Bansdeopur Mine, Kusunda P. O., Bihar and Orissa. | Bansdeopur Coal Co., Ld. | Rupan Chamar, (m.), 27, <i>Coal-carrier.</i> Ganu Chamar, (m.), 48, <i>Coal-cutter.</i> | Coal | Whilst Ganu was cutting floor coal in a pillar-cutting district, a triangular slab of coal, 9' long by 2' high and 1'-3" thick, fell from the roof and side from a height of 20 feet. Both he and Rupan were killed on the spot. Inspection and inquiry made. |

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| 45 | 18th February, 5-15 P. M. | Kutchi Dhana Mine, Ramkona P. O., Central Provinces. | Indian Manganese Co., Ld. | Amyar Khan, (m.), 40, Coolie. | Manganese | Deceased was using a crowbar to remove a portion of rock from the overburden. He slipped and fell with the rock which probably struck him on its rebound. He received injuries from which he died three days later. |
| 46 | 18th February, 10-30 P. M. | Lodna Mine, Jharia P. O., Bihar and Orissa. | Lodna Colliery Co., Ld. | Sukar Mani Korin, (f.), 45, Cool-carrier. | Coal | In a floor-cutting district two coal cutters were employed on a ladder in dressing down overhanging side coal from a pillar 20 feet high. Deceased loaded the coal which they cut and carried it away in baskets. Whilst she was loading a basket, a mass of about 2 cwts. of coal, fell prematurely from the side. She was struck by the falling coal and sustained injuries to which she succumbed shortly after. Inspection and inquiry made. |
| 47 | 17th March, 12-30 P. M. | East Ledo Mine, Margherita P. O., Assam. | Assam Railways and Trading Co., Ld. | Samarn, (m.), 30, Cool-shoveller. | Coal | A piece of side coal fell from the side of a "fault" and crushed deceased against the side of the gallery in which he was shovelling coal. He died from internal injuries. Inspection and inquiry made. |
| 48 | 23rd March, 4-30 A. M. | Kajora Mine, Ondal P. O., Bengal. | Kajora Coal Co., Ld. | Khudia Passi, (m.), 25, Miner. | Coal | While the side of a main gallery was being undercut to widen it, the undercut portion, measuring 7' x 4'-3" x 9' thick, fell and pinned deceased against the opposite side of the gallery, which was only 4 feet wide. He received injuries from which he died seventeen hours later. Inspection and inquiry made. |
| 49 | 13th April, 2-30 P. M. | Baraboni Mine, Asansol P. O., Bengal. | Baraboni Coal Concern, Ld. | Surja Marandi, (m.), 35, Overman. | Coal | Deceased was supervising the removal of side coal, measuring 17' x 8' x 1'-6" thick, when it fell unexpectedly and a small portion struck him. He died from the effects of his injuries two hours later. Inspection and inquiry made. |
| 50 | 27th April, 11-30 P. M. | Jharia Khas Mine, Jharia P. O., Bihar and Orissa. | Standard Coal Co., Ld. | Kessu Nazra, (m.), 36, Cool-cutter. | Coal | Deceased worked in a pillar-cutting district. He broke down a fence, entered the "goaf" and began to cut coal from the corner of a pillar, which had been reduced to 20' x 10' x 21' high and abandoned a fortnight previously. Whilst so engaged, a mass of side coal, exceeding 4 tons in weight, fell upon him from the corner of the pillar from a height of 8 feet. Death must have been instantaneous. Inspection and inquiry made. |
| 51 | 20th May, 2 P. M. | Joyramdanga Mine, Asansol P. O., Bengal. | New Beerbhum Coal Co., Ld. | Pram Gope, (m.), 30, Propping mistri. | Coal | Deceased was sitting in a gallery cutting timber, when a piece of side coal fell and knocked out a prop. The falling prop struck him and threw him forward upon a stone, which smashed the frontal bone of his head. He died six hours later without having regained consciousness. Inspection and inquiry made. |
| 52 | 1st June, 12-30 P. M. | Huntodih Mine, Mohoda P. O., Bihar and Orissa. | Huntodih Coal Co., Ld. | Chottu Bauri, (m.), 20, Cool-cutter. | Coal | Deceased whilst at work in the face of a gallery in a seam 6 feet thick, rising at an angle of 1 in 5, was killed by a mass of 15 cwts. of coal, which fell from two converging "slips" in the face. Before the accident the "slips" could not be seen. Inspection and inquiry made. |
| 53 | 8th June, 10 A. M. | Bhor Mine, Quetta P. O., Baluchistan. | Sirdar Bhawal Khan | Taj Mahomed, (m.), 19, Coolie. | Coal | Whilst deceased and another man were filling bags of coal, which had been extracted on the previous evening, a fall of roof and sides occurred killing deceased and slightly injuring the other man. |
| 54 | 14th June, 2-30 P. M. | Pagaye Mine, Tavoy P. O., Burma. | Rangoon Mining Co., Ld. | Horel, (m.), 30, Tribute worker. | Wolfram | Deceased was buried up to the waist by a fall of earth in an "open work." He was rendered unconscious and died that evening probably from shock. Inspection and inquiry made. |
| 55 | 2nd July, 5 P. M. | Junawani Mine, Ramtek P. O., Central Provinces. | Bansilal Abirchand Mining Syndicate. | Guni Dukhia, (f.), 18, Coolie. | Manganese | A fall occurred from the side, from an area of about 6' x 6' and buried deceased. She probably died from suffocation. The ground is said to have been loosened by heavy rain. |

APPENDIX II—contd.

Fatal Accidents, 1916—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 wrought. | Cause of accident and remarks. |
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| FALLS OF ROOF AND SIDES—contd. | | | | | | |
| <i>(b) Falls of sides—concl'd</i> | | | | | | |
| 56 | 4th July, 10 A.M. | Wazunchaug Mine, Tavoy P. O., Burma. | Quah Cheng Guan . . . | Maung Pyu, (m.), 30, <i>Labourer.</i> | Wolfram . | Deceased and another man were working in an "open cut" when about half a ton of earth fell from the side and buried deceased. Death was instantaneous. There had been very heavy rain on the morning of the accident. |
| 57 | 12th July, 8 P.M. | Rubber Mile Mine, Tavoy P. O., Burma. | Finlay, Fleming & Co. . | Ah Loy, (m.), 40, <i>Tributing coolie.</i> | Wolfram . | Deceased was undercutting the hanging wall in an adit when about half a ton of stone fell upon him from a height of about 5 feet and killed him. Inspection and inquiry made. <i>See Report, page 9.</i> |
| 58 | 15th July, 1 A.M. | Chanch Mine, Barakar P. O., Bihar and Orissa. | Bengal Coal Co., Ld. . | Fucha Manjhi, (m.), 28, <i>Coal-cutter.</i> | Coal . | Whilst deceased was cutting side coal, a piece of overhanging side coal, measuring 6'-6" long × 7' broad × 1'-9" to 0'-6" thick, fell from a "slip." He sustained a compound fracture of his right leg and severe lacerations and succumbed to his injuries eleven days later. Inspection and inquiry made. |
| 59 | 1st August, 11 A.M. | Kutchi Dhana Mine Ramkona P. O., Central Provinces | Indian Manganese Co., Ld. | Bandhari Teli, (m.), 35, <i>Miner.</i> | Manganese . | Deceased was working at the base of a vertical face of ore, 9 feet in height, when a mass of ore, weighing about two tons, fell upon him. He was killed instantly. Inspection and inquiry made. |
| 60 | 30th August, 3-30 P.M. | South Jibutil Mine, Morrison P. O., Madras. | Jibutil (Anantapur) Gold Mines, Ld. | Coopan, (m.), 26, <i>Hand-driller.</i> | Gold . | A stone, estimated to measure 18" × 9" × 4", fell from the hanging wall, through a distance of 15 feet, upon the right leg of the deceased who was working at the bottom of the stope. He died in hospital on 11th December. Inspection and inquiry made. |
| 61 | 17th September, 9-30 P.M. | Alkusa and Kiska Mines, Kusunda P. O., Bihar and Orissa. | Kanga & Co. . . . | Gurdayal Dosadh, (m.), 25, <i>Coal-cutter.</i> | Coal . | Deceased was robbing the corner of a pillar on the side of a haulage road. A "slip" of side coal, 14' × 1' × 2', fell over. A part of it, measuring 6' × 2' × 2', fell upon him and pinned him down. He expired before he could be extricated. Inspection and inquiry made. |
| 62 | 9th October, 5-30 A.M. | Kurkend Mine, Kurkend P. O., Bihar and Orissa. | Sudamdih Coal Co., Ld. . | Mona Teli, (m.), 30, <i>Coal-cutter.</i> | Coal . | Deceased, contrary to orders, was cutting coal from the base of a pillar. A piece of coal, measuring 4' × 3' × 2', fell from a "slip" from a height of 5 feet striking deceased and killing him instantly. Inspection and inquiry made. |
| 63 | 18th October, 5 P.M. | Lachmoniah Mine, Domchanch P. O., Bengal. | Jhari Singh | Budhan Gope, (m.), 30, <i>Miner.</i> | Mica | Whilst some forty persons were at work in a quarry, 22 feet deep, about 2 tons of soft schist fell from the side, from a height of 7 feet. Deceased was killed on the spot and another miner was injured but not severely. Inspection and inquiry made. |

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| 64 | 26th October, 7 A.M. | Douia Mine, Manharpur P. O., Bihar and Orissa. | Bengal Iron and Steel Co., Ltd. | Phutka, (m.), 10, Coolie. | Iron ore | Deceased was struck on the back of the head by a piece of ore which fell down a slope from a higher level. He died a week later. |
| 65 | 6th November, 2-15 P.M. | Bansdeopur Mine, Kusunda P. O., Bihar and Orissa. | Bansdeopur Coal Co., Ltd. | Dhan Bhuia, (m.), 38, Coal-cutter. | Coal | Deceased, during the temporary absence of the sirdar, left his working place and went beyond a fence, where he began to cut coal from the corner of a pillar. A mass of coal, 20 feet high by 6 feet wide and 3 feet 6 inches thick, weighing about 16 tons, fell from a smooth "joint." He was killed on the spot. Inspection and inquiry made. |
| 66 | 14th November, 4 P.M. | Chowrasi Mine, Dishergarh P. O., Bengal. | Equitable Coal Co., Ltd. | Pailu, (f.), 25, Dust-carrier. | Coal | Deceased was walking along a level when a piece of coal, 2'x2'x1', fell upon her from the side of a pillar from a height of 10 feet. She sustained a simple fracture of a thigh and died from tetanus fifteen days later. Inspection and inquiry made. |
| 67 | 22nd November, 11-30 A.M. | New Khas Jharia Mine, Jharia P. O., Bihar and Orissa. | Ramjus Agarwala | Lilla Bauri, (m.), 32, Coal-cutter. | Coal | During the temporary absence of the overman and sirdar the deceased left his working place, passed through a fence and began to cut coal from the corner of a pillar, 40 feet in height. Some 8 tons of coal fell from a "slip" killing him on the spot. The assistant manager, the overman and a sirdar were dismissed at the request of the Inspector of Mines. Inspection and inquiry made. |
| 68 | 26th November, 6 A.M. | Diarwa Mine, Kodarma P. O., Bihar and Orissa. | Monoranjan Guha | Dewa Teli, (m.), 24, Earth-cutting coolie. | Mica | Deceased went into the mouth of a gallery full of water, at the bottom of a quarry, 20 feet deep, to wash his hands, in spite of warnings to the contrary. The ground above was being sloped back at the time. A mass of strata, weighing some 4 to 5 cwts. fell without any warning and buried him. He sustained serious injuries to his head and shoulder and died on the way to hospital. Inspection and inquiry made. |
| 69 | 9th December, 2-30 P.M. | Widnes Mine, Tavoy P. O., Burma. | High Speed Steel Alloy Co., Ltd. | Low Kid, (m.), 27, Tributor. | Wolfram | Deceased was killed by a fall of overburden, which he was undermining, in an open cast working. Three other men were injured. |
| 70 | 13th December, 9-30 A.M. | Thandaung Mine, Tavoy P. O., Burma. | Steel Bros. & Co., Ltd. | Pahalwan, (m.), 25, Coolie. | Wolfram | Deceased, against orders, was undermining the side of an open cast working when about half a ton of earth fell on him from a height of 10 feet, and killed him instantly. |
| 71 | 27th December, 12-15 P.M. | Bhowra Mine, Jamadoba P. O., Bihar and Orissa. | Eastern Coal Co., Ltd. | Thethor Bhuia, (m.), 28, Coal-cutter. | Coal | Whilst deceased, under the direct supervision of a sirdar, was taking down overhanging coal from a pillar, 18 feet high, in a pillar-cutting district, he was struck down by a mass of coal, weighing about a ton, which fell upon him from a height of 7 feet. He was killed on the spot. Inspection and inquiry made. |

IN SHAFTS.

Overwinding—(4 deaths).

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| 72 | 10th August, Midnight. | Sanctoria Mine, Dishergarh P. O., Bengal. | Bengal Coal Co., Ltd. | Akhal Singh, (m.), 32, Sukhar Singh, (m.), 30, Timbermen, Fagu Napit, (m.), 35, Stone-cutter. | Coal | Whilst four men were being lowered in a shaft, 238 feet deep, the engineman lost control of the winding engine, and the cage struck the landing platform at the bottom with violence. Akhal Singh was killed outright, Sukhar Singh died three days later and Fagu Napit eleven days later. The fourth man was slightly injured. Inspection and inquiry made. <i>See Report, page 9.</i> |
|----|---------------------------|---|-----------------------|---|------|--|

APPENDIX II—contd.

Fatal Accidents, 1916—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 wrought. | Cause of accident and remarks. |
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| IN SHAFTS—contd. | | | | | | |
| Overwinding—concl'd. | | | | | | |
| 73 | 25th September, 10-40 A.M. | Parbelia Mine, Dishergarh P. O., Bengal. | Bengal Coal Co., Ltd. | Gouri Singh, (m.), 24, <i>Stone-cutter.</i> | Coal | Deceased was a sinker, working at the bottom of a shaft, 280 feet in depth. An overwind occurred. The bell box of the safety detaching hook was smashed and a piece of the falling metal, 2½ lbs. in weight, struck deceased on his head. He died two days later. Inspection and inquiry made. |
| Ropes and chains breaking—(1 death). | | | | | | |
| 74 | 27th May, 5-46 P.M. | North Anantapur Mine, Morrison P. O., Madras. | North Anantapur Gold Mines, Limited. | Erode Rahman, (m.), 27, <i>Blaster.</i> | Gold | Deceased was riding in a loaded skip in a winze and had reached within 10 feet of the top, when the winding rope broke. He fell through a distance of 200 feet and was killed outright. Inspection and inquiry made. |
| Whilst ascending or descending by machinery—(11 deaths). | | | | | | |
| 75 | 4th January, 2 P.M. | Srikristopur Mine, Kalipahari P. O., Bengal. | Baliram and Co. | Dharu Manjhi, (m.), 45, <i>Miner.</i> | Coal | Deceased was descending a shaft, 173 feet deep, in a cage. He fell out of the cage to the bottom of the shaft and was killed instantly. The cage was not fitted with gates. Inspection and inquiry made. <i>See Report, page 10.</i> |
| 76 | 17th February, 3-30 P.M. | Jibutil Mine, Morrison P. O., Madras. | Jibutil (Anantapur) Gold Mines, Ltd. | Malappati, (m.), 28, <i>Stuff coolie.</i> | Gold | Deceased and a fellow workman were, against standing orders, riding on a loaded bucket in a shaft, 350 feet in depth. When nearing the surface deceased released his hold and fell to the bottom of the shaft. He was killed outright. Inspection and inquiry made. |
| 77 | 20th February, 7 A.M. | Sitalpur Mine, Dishergarh P. O., Bengal. | Bengal Coal Co., Ltd. | Dilu Mahato, (m.), 36, <i>Friction roller coolie.</i> Chutu Barrih, (m.), 24, Nandu Barrih, (m.), 20, Keshub Barrih, (m.), 26, Tulsi Barrih, (m.), 18, <i>Stone cutters.</i> Lalchand Barrih, (m.), 30, <i>Rail mistri.</i> | Coal | The six deceased had entered the cage in order to be lowered to the bottom of a shaft, 375 feet deep. Just as the descent commenced, the capping of the winding rope parted from the rope and the cage, with the six men, fell to the bottom. All were killed instantly. Inspection and inquiry made. <i>See Report, page 10.</i> |

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| 78 | 7th August, 11 A.M. | Barmondia Mine, Sitarampur P. O., Bengal. | Damuda Coal Co., Ltd. | Sura Bauri, (m.), 25, <i>Hookman.</i> | Coal | Deceased with three other men was being raised up a shaft, 670 feet deep. When the cage reached a point some 200 feet from the bottom of the shaft deceased fell out of the cage. He was killed instantly. Inspection and inquiry made. |
| 79 | 6th September, 3 P.M. | Central Dhurmaband Mine, Katrasgarh P. O., Bihar and Orissa. | Central Dhurmaband Coal Co., Ltd. | Puran Kumbar, (m.), 30, <i>Head fitter.</i> | Coal | Whilst deceased and another man were being raised on a scaffold, which was actuated by a hand winch, from the bottom of a shaft, 271 feet in depth, deceased fell off into water below and was drowned. Inspection and inquiry made. |
| 80 | 16th November, 2 P.M. | South Bulliari Mine, Kustore P. O., Bihar and Orissa. | East Indian Coal Co., Ltd. | Gutwa Dhobi, (m.), 22, <i>Onsetter.</i> | Coal | Deceased was the onsetter in charge at the bottom of a shaft, 275 feet deep. The usual signal for men to ride was received at the surface, and the cage was raised in the usual manner. When it arrived at the surface, he was seen to be lying half in and half out of the cage, clasping its end. The winding engine was stopped before the cage reached the banking level, but, before assistance could be given, the deceased relaxed his hold and fell to the bottom of the shaft. His dead body was recovered shortly after. Inspection and inquiry made. |
| Falling into the shafts from the surface—(5 deaths). | | | | | | |
| 81 | 29th February, 9 A.M. | Kurkend Mine, Kurkend P. O., Bihar and Orissa. | Marine Coal Co., Ltd. | Manga Koiri, (m.), 28, <i>Banksman.</i> | Coal | Whilst assisting the European assistant manager to mark off the positions of the guide ropes for automatic fence gates, deceased overbalanced and fell to the bottom of a shaft, 250 feet deep. He was killed on the spot. Inspection and inquiry made. |
| 82 | 11th May, 2 P.M. | Kujama Mine, Jharis P. O., Bihar and Orissa. | Kanji and Shamji Nanji. | Daya Walji Chohan, (m.), 50, <i>Coal-carrier.</i> | Coal | Deceased was employed in carrying coal through a gallery in an upper working in a seam of coal, 40 feet thick. In the floor of this gallery a shaft, 5 feet in diameter and 26 feet deep, makes a connection with a gallery in the lower working of the same seam. His lamp was accidentally extinguished and he blundered into the wire, which was fencing the shaft. One of the posts of the fencing gave way and he fell to the bottom of the shaft. He sustained severe injuries to his head and died a week later. Inspection and inquiry made. |
| 83 | 17th May, 11-45 A.M. | Lutchipur Mine, Sitarampur P. O., Bengal. | Lutchipur Coal Co., Ltd. | Nokul Bauri, (m.), 20, <i>Hookman.</i> | Coal | A fitter engaged in repairing the guide of an automatic gate, fencing a cage pit, had opened the gate for his convenience in working. Deceased, whilst placing a tub in position in front of the opening, ready for the resumption of winding, pushed the tub too far and fell with it to the bottom of the shaft, 356 feet below. He was killed on the spot. Inspection and inquiry made. |
| 84 | 22nd July, 9 A.M. | Chinitaung Mine, Monywa P. O., Burma. | A. K. A. S. Jamal | Thapa Damu, (m.), 32, <i>Miner.</i> | Copper | Deceased was winding a bucket, by means of a hand winch, up a shaft 90 feet deep. He slipped and fell to the bottom being killed instantly. |
| 85 | 27th August, 10 P.M. | Bansdeopur Mine, Kusunda P. O., Bihar and Orissa. | Bansdeopur Coal Co. | Sukar Dosadh, (m.), 25, <i>Boiler fireman.</i> | Coal | Deceased, whilst sitting on top of the fencing around a shaft, overbalanced and fell to the bottom, a distance of 224 feet. He was killed instantly. Inspection and inquiry made. |

APPENDIX II—*contd.*

Fatal Accidents, 1916—*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 wrought. | Cause of accident and remarks. |
|--|----------------------------|--|-------------------------------|---|--------------------------|---|
| IN SHAFTS—<i>contd.</i> | | | | | | |
| Falling from part of the way down—(2 deaths). | | | | | | |
| 86 | 16th June, 1 A.M. | Katras Mine, Katrasgarh P. O., Bihar and Orissa. | Nowagarh Coal Co., Ld. | Pal Singh, (m.), 25, <i>Labourer.</i> | Coal | Deceased and two other men were suspended in a bucket at a depth of 50 feet in a sinking shaft, 280 feet deep. They were engaged in re-adjusting one of the clamps, which secured three ranges of pipes to two wire ropes suspended from the surface. Whilst deceased was tightening a nut on the clamp, he overbalanced and fell into water at the bottom of the shaft. His body was found ten hours later. Death was considered to have been caused by drowning. Inspection and inquiry made. |
| 87 | 20th December, 8 P.M. | Ramagiri Mine, Morriston P. O., Madras. | Anantapur Gold Fields, Ld. | Pyaneendy, (m.), 38, <i>Blaster.</i> | Gold | As deceased was climbing down a winze, 200 feet deep, he slipped and fell to the bottom. He was probably overcome by fumes caused by blasting. He was killed instantly. |
| Things falling from the surface—(2 deaths). | | | | | | |
| 88 | 22nd January, 4-20 P.M. | Sodepur Mine, Sitarampur P. O., Bengal. | Bengal Coal Co., Ld. | Ghoru Bauri, (m.), 19, <i>Onsetter.</i> | Coal | A piece of coal, measuring about 3" x 2" x 1½", fell from the surface, through the clearance between the protection boards and the cage, down a shaft, 417 feet deep, and struck deceased on the head, fracturing his skull. He died two days later. Inspection and inquiry made. <i>See Report, page 13.</i> |
| 89 | 6th February, 1 A.M. | Bhalgora Mine, Jharia P. O., Bihar and Orissa. | Bhalgora Coal Co., Ld. | Majhlu Manjhi, (m.), 20, <i>Pit sinker.</i> | Coal | Whilst a gang of men were at work at the bottom of a sinking shaft, 245 feet deep, a piece of planking, 24" x 9" x 1½", fell from the surface. Deceased was struck on his head and killed on the spot. There was no evidence to show how the planking came to fall into the shaft, but it appears to have been used as a manhole covering for an opening in a platform giving access to a range of pipes. Inspection and inquiry made. |

| Things falling from part of the way down—(2 deaths). | | | | | | |
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| 90 | 13th May, 7 A.M. | Kurhbari Mine, Giridih P. O., Bihar and Orissa. | East Indian Railway Co. | Budhu Meah, (m.), 48, <i>Sycc.</i> | Coal | Deceased was standing inside a cage at the bottom of a shaft, 450 feet deep, when a piece of stone, measuring 2'-6" x 1'-7" x 9", fell from the side of the shaft, through a distance of 98 feet, upon the bonnet of the cage. His neck was broken and he died instantly. Inspection and inquiry made. |
| 91 | 18th November, 1 P.M. | North Kustore Mine, Kustore P. O., Bihar and Orissa. | Raniganj Coal Associa- tion, Ltd. | Lalu Panjabi, (m.), 35, <i>Foreman labourer.</i> | Coal | Guide ropes were being fitted in a new shaft, 312 feet deep. In the process of tightening one of the ropes it fouled a pipe, 3" in diameter and 75 feet in length, supported in the shaft, near the surface, by four clamp bolts cemented in holes in the side of the shaft. The lowest of the clamp bolts drew out of its hole and fell to the bottom of the shaft, where deceased and two other men were engaged in fixing the guide ropes. Deceased was struck on his head and died two days later. Inspection and inquiry made. |
| Miscellaneous—(2 deaths). | | | | | | |
| 92 | 3rd February, 11 A.M. | Loyabad Mine, Bansjora P. O., Bihar and Orissa. | Barakar Coal Co., Ltd. | Maula Meah, (m.), 27, <i>Foreman labourer.</i> | Coal | In a shaft, 231 feet deep, the four guide ropes are kept taut by suspending a square wooden box filled with stones from their lower ends. During the operation of erecting a new head gear the box and guide ropes were lowered to the bottom of the shaft. When the erection was complete, the guide ropes were raised, by means of the winding engine rope and adjusted to the proper length. A gang of eight coolies was then employed in replacing the box. Whilst they were so engaged one of the guide ropes was raised a distance of 18 inches, causing the box to cant upwards at one corner. Deceased, who was sitting on the box at the time, was crushed between the box and one of the beams carrying the cage platform. He was killed on the spot. Inspection and inquiry made. |
| 93 | 20th March, 10 A.M. | Sodepur Mine, Nos. 9 and 10 pits, Sittrampur P. O., Lengal. | Bengal Coal Co., Ltd. | Mongal Bauri, (m.), 30, <i>Trolleyman.</i> | Coal | Deceased was found beneath a cage which had just reached the shaft bottom. It was his duty to unhook the fence chain on the cage and it is surmised that he slipped and fell on the sumpboards as he was approaching the shaft. He died a few moments after being released. Inspection and inquiry made. |
| BY EXPLOSIVES—(4 deaths). | | | | | | |
| 94 | 29th May, 11 A.M. | Meke Myabya Mine, vay P. O., Burma. | Lim Kyi Yan | Ah Foon, (m.), 24, <i>Coolie.</i> | Wolfram | As deceased was pressing a detonator into a dynamite cartridge, it exploded in his hand. He received injuries from which he died nine hours later. |

APPENDIX II—contd.

Fatal Accidents, 1916—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 wrought. | Cause of accident and remarks. |
|--|------------------------------|--|----------------------------|--|--------------------------|---|
| BY EXPLOSIVES—concl'd. | | | | | | |
| 95 | 18th July, 6-30 P.M. | Kutchi Dhana Mine, Ramkona P. O., Central Provinces. | Indian Manganese Co., Ltd. | Gouri Shanker Kole, (m.), 35, Miner. | Manganese. | Deceased and another coolie, who was injured, attempted to tamper with a shot hole that had missed on the previous evening. While doing so, the shot went off and deceased died from shock and other complications sixteen days later. A mines foreman who should have superintended the work was dismissed. Inquiry held. |
| 96 | 29th July, 4-30 P.M. | Tagu Mine, Mergui P. O., Burma. | E. Ahmed | Scin Pe, (m.), 20, Coolie. | Wolfram . | Deceased returned too soon to the place where a shot had hung fire. It went off and killed him instantly. |
| 97 | 14th September, 12 Noon. | Aldih Mine, Sitarampur P. O., Bengal. | Aldih Coal Co., Ltd. | Jhaman Nunia, (m.), 20, Gunpowder maker. | Coal . | A person carelessly threw a lighted cigarette amongst some country gunpowder spread out in the open to dry. The powder caught fire and burnt deceased who was close by. He died twenty hours later. Inspection and inquiry made. |
| IRRUPTIONS OF WATER OR FALLING INTO WATER—(3 deaths). | | | | | | |
| 98 | 25th May, 11-30 A.M. | Bulluari Mine, Kurkend P. O., Bihar and Orissa. | Bulluari Coal Co. . . . | Tejua Kandua, (m.), 30, Coal-cutter. | Coal . | A main gallery holed through, unexpectedly, into some old workings containing a large quantity of water. Deceased and nine other men were underground at the time. The nine men were able to escape up the shaft but deceased was overwhelmed by the flood and drowned before he could follow. Inspection and inquiry made. |
| 99 | 22nd September, 6-30 P.M. | Damaghurria Mine, Kulti, P. O., Bengal. | Damaghurria Coal Co., Ltd. | Akkur Bauri, (m.), 35, Manu, (m.), 45, Main gallery drivers. | Coal . | During a heavy storm of rain a protective embankment was breached, and an incline was inundated. The two deceased, who were in the incline, were drowned in the flood. Inspection and inquiry made. |

HAULAGE—(12 deaths).

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| 100 | 3rd January, 7-30 A.M. | Narsamuda Mine, Sitarampur P. O., Bengal. | Sitarampur Coal Co., Ld. | Bhim Bauri, (m.), 37, <i>Signalman.</i> | Coal | As a set of twenty-one empty tubs was being lowered down a main dip haulage, the leading seven tubs ran wild owing to a drawbar breaking. Deceased was crushed between the side of a pillar and the runaway tubs. He was killed instantly. Inspection and inquiry made. |
| 101 | 7th January, 5-30 P.M. | Aldih Mine, Sitarampur P. O., Bengal. | Aldih Coal Co., Ld. | Nidhu Baurin, (f.), 35, <i>Bailing kamin.</i> | Coal | As deceased with some companions was ascending a main haulage road she was knocked down and run over by a set of empty tubs. She received injuries from which she died twenty-two hours later. Inspection and inquiry made. |
| 102 | 2nd February, 5-30 A.M. | Tikak Mine, Margherita P. O., Assam. | Assam Railways and Trading Co., Ld. | Durga Singh Thapa, (m.), 32, <i>Trammer.</i> | Coal | Deceased was travelling out of the mine along the haulage road. He was struck by the outgoing set of tubs and killed instantly. Inspection and inquiry made. |
| 103 | 6th April, 2 A.M. | Dishergarh Mine, Dishergarh P. O., Bengal. | Equitable Coal Co., Ld. | Muchiram Manjhi, (m.), 30, <i>Coal-cutter.</i> | Coal | Deceased with companions was sleeping on the side of a tram line. A tub of coal, which was being pushed from inbye, ran wild, and became derailed close to deceased, and either ran over or struck his left leg, causing a compound fracture. He died fifteen days later. Inspection and inquiry made. |
| 104 | 19th April, 9-30 A.M. | Bon Jumerri Mine, Salanpur P. O., Bengal. | Bon Jumerri Anthracite Colliery, Ld. | Kunjo Lohar, (m.), 44, <i>Coal-cutter.</i> | Coal | An empty tub was being lowered down a haulage road when it collided with a full tub standing at the end of a plane. Deceased was crushed between the two tubs whilst in the act of picking up fallen coal. His left hip joint was dislocated. This injury and the shock accelerated an attack of strangulated hernia and he succumbed three hours later. He had suffered from hernia prior to the accident. Inspection and inquiry made. |
| 105 | 29th April, 7 A.M. | Namdang Mine, Margherita P. O., Assam. | Assam Railways and Trading Co., Ld. | Punty, (f.), 24, <i>Brakeswoman.</i> | Coal | As deceased was walking into the mine along the haulage road, she was run down by a train of tubs and dragged a distance of about 50 yards. When found she was quite dead. Inspection and inquiry made. |
| 106 | 29th April, 1-30 P.M. | Ekra Khas Mine, Bansjora P. O., Bihar and Orissa. | The Hon'ble Maharaja Sir M. C. Nandi, K.C.I.E. | Chamarin Bilaapurin, (f.), 28, <i>Coal-carrier.</i> | Coal | Whilst a train of eight empty tubs was being lowered down a haulage slope a coupling chain fell off and seven tubs ran wild. Deceased, who was walking out of the mine at the time, was knocked down and killed on the spot. Inspection and inquiry made. |
| 107 | 18th May, 11 A.M. | Sodepur Mine, Sitarampur P. O., Bengal. | Bengal Coal Co., Ld. | Latu Bauri, (m.), 50, <i>Coal-cutter.</i> | Coal | Deceased, whilst walking towards the shaft bottom, was pinned between a stationary tub of coal and another tub which was being shunted. He sustained internal injuries from which he died six hours later. Inspection and inquiry made. |
| 108 | 8th July 3 A.M. | Sitalpur Mine, Dishergarh P. O., Bengal. | Bengal Coal Co., Ld. | Sahadeo Ram, (m.), 26, <i>Underground tub checker.</i> | Coal | As a train of eight empty tubs was being lowered down an engine plane, the front tub broke away and struck deceased, who was walking down the road, 400 feet below, and killed him instantly. Inspection and inquiry made. |

APPENDIX II—contd.

Fatal Accidents, 1916--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 wrought. | Cause of accident and remarks. |
|---|------------------------------|---|-----------------------------------|---|--------------------------|--|
| HAULAGE—concl'd. | | | | | | |
| 109 | 21st July, 2 A.M. | Alkusa Mine, Kustore P. O., Bihar and Orissa. | Raniganj Coal Association, Ld. | Punit Dosadh, (m.), 27, <i>Hookman.</i> | Coal | Whilst a train of twelve empty tubs was being lowered down a haulage slope, 2,000 feet in length, a coupling chain fell off, and nine tubs ran wild into the landing station below. Their impact broke the buffer stop, and five loaded tubs ran over the ends of the rails and were piled up in a heap a short distance below. The haulage attendant attached the rope to these tubs and gave the signal to raise. After about three feet of rope had been hauled up the axle of one of the tubs caught under the end of the rails. The excessive strain set up caused the rope to break at a point about 250 feet from the hauling engine. Deceased had been stationed at a curve about 600 feet above the landing station, where it was his duty to transmit signals. He failed to stand clear and was struck by the released rope after its fracture. He sustained injuries to which he succumbed the same day. Inspection and inquiry made. |
| 110 | 3rd August, 7 P.M. | Karmatand Mine, Nowagarh P. O., Bihar and Orissa. | D. H. Agarwala . | Rang Lal Napit, (m.), 24, <i>Water bailer.</i> | Coal | Three empty tubs ran wild from the top of a haulage slope, dipping at an angle of 1 in 3. Deceased was knocked down and sustained injuries to which he succumbed the next day. Inspection and inquiry made. |
| 111 | 31st December, 10-15 P.M. | Jatachappa Mine, Pench P. O., Central Provinces. | Upper Pench Coal Co., Ld. | Ramadin, (m.), 26, <i>Water-coolie.</i> | Coal | Some full tubs ran wild down a self-acting incline and struck deceased at the bottom of the incline. He sustained injuries, from the effects of which he died twelve days later. Inspection and inquiry made. |
| SUNDRIES UNDERGROUND—(7 deaths). | | | | | | |
| 112 | 5th March, 11-30 A.M. | Khost Mine, Khost P. O., Baluchistan. | North-Western Railway . | Dittu, (m.), 35, <i>Plate laying coolie.</i> | Coal | Deceased was descending a haulage road, dipping at 51 degrees, to examine the track. He slipped and fell 900 feet to the bottom being killed instantly. Inspection and inquiry made. |
| 113 | 13th July, 1 P.M. | Mayo Mine, Khewra P. O., Panjab. | Government of India . | Buksh, (m.), 50, <i>Miner.</i> | Salt | Deceased was employed in carrying salt from a working face for a distance of about 150 feet to a tram road. He carried out a load, and before depositing it, was seized with giddiness and fell between the edge of the loading wharf and a tram standing on the line. He sustained a concussion of the spine and died twelve days later of acute cerebro-spinal meningitis. Deceased was an old man and was weak through observance of the Ramzan fast. Inspection and inquiry made. |

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| 114 | 15th July, 3-30 P.M. | Chanck Mine, Barakar P. O., Bihar and Orissa. | Bengal Coal Co., Ltd. | Budhni Mejhian, (f.), 62, <i>Dust Kamin.</i> | Coal | Deceased was filling dust, close to where some miners were extracting a pillar. A large piece of coal fell from the pillar and deceased in attempting to run back out of danger, fell over. She succumbed to hæmorrhage of the brain three hours later. Inspection and inquiry made. |
| 115 | 2nd October, 11 P.M. | Golukih Mine, Jharis P. O., Bihar and Orissa. | N. M. Chowdhury & Co. | Dugi Mejhian, (f.), 20, <i>Coal-carrier.</i> | Coal | Deceased was pushing an empty tub along a tram line level. In an attempt to keep clear of two tubs that were being brought along behind her, she stepped to one side, and fell down into a dip gallery in which some 8 feet to 10 feet of floor had been extracted. While in the act of falling she caught hold of the side of the tub, overbalanced it and dragged it over with her. She sustained a broken neck. Death was instantaneous. Inspection and inquiry made. |
| 116 | 7th October, 10-45 A.M. | Dishergarh Mine, Dishergarh P. O., Bengal. | Equitable Coal Co., Ltd. | Raghnath Dubey, (m.), 40, <i>Electrical fitter.</i> | Coal | Deceased, whilst cutting an electrical lighting cable, charged with alternating current at 110 volts., received a shock and fell down. He had, before commencing work, cut out the switch, but an unauthorized person replaced it. In falling he struck the back of his head against a pipe lying on the ground. According to medical evidence his death was due to an electric shock. Inspection and inquiry made. |
| 117 | 23rd October, 3-15 P.M. | New-West Ledo Valley Mine, Margherita P. O., Assam. | Assam Railways and Trading Co., Ltd. | Billar, (m.), 22, <i>Horse driver.</i> | Coal | Deceased, who was driving a restive horse, dropped his lamp, and whilst endeavouring to pick it up, let go the bridle. The horse moved forward and crushed him between the side and tub. He died a month later from injuries received. Inspection and inquiry made. |
| 118 | 15th December, 12-30 P.M. | Noonoodih Mine, Jamadoba P. O., Bihar and Orissa. | Bengal Iron and Steel Co., Ltd. | Lakhan Bauri, (m.), 30, <i>Hauling engineman.</i> | Coal | Whilst deceased was opening a cast iron valve on a range of steam pipes, $\frac{1}{4}$ inch in diameter, the valve burst and he was scalded so severely that he died eight days later. Inspection and inquiry made. |

SURFACE MACHINERY.—(3 deaths).

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| 119 | 24th June, 6-30 P.M. | Bhowra Mine, Jamadoba P. O., Bihar and Orissa. | Eastern Coal Co., Ltd. | Punna Nowa, (m.), 22, <i>Engine minder.</i> | Coal | Deceased attempted to oil a disintegrating machine whilst it was in motion. He was drawn into the machinery and killed on the spot. Inspection and inquiry made. |
| 120 | 25th June, 5-30 P.M. | Titalmuri Mine, Sijua P. O., Bihar and Orissa. | Titalmuri Collieries, Ltd. | Jiva Rajwar, (m.), 13, <i>Shale picker.</i> | Coal | Deceased worked at a mechanical coal screening plant and arrived at his home, about one hundred yards distant. He had been running, but fell down and became unconscious, dying about twenty minutes later. His skull and breast bone were found to be fractured. There were contused wounds on his body and the top of his left thumb was missing. No one saw the accident and there was nothing to show how it occurred. He must however have been crushed somehow in the machinery. The machinery was fenced. Inspection and inquiry made. |
| 121 | 9th December, 11-45 A.M. | Sazar-In wash mill, Mogok P. O., Burma. | Burma Ruby Mines, Ltd. | Maung Pho Nyin, (m.), 33, <i>Clutchman.</i> | Babies | Deceased fell and was crushed between the gear wheels of a washing mill and killed instantly. |

APPENDIX II—contd.

Fatal Accidents, 1916—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 wrought. | Cause of accident and remarks. |
|--|-------------------------------------|---|-----------------------------------|---|--------------------------|---|
| ON SURFACE RAILWAYS AND TRAMWAYS BELONGING TO THE MINE.—(6 deaths). | | | | | | |
| 122 | 29th April, 1 P.M. | Kurhbari Mine, Giridih P. O., Bihar and Orissa. | East Indian Railway Co. | Banu Bhuia, (m.), 25, <i>Loco. Guard.</i> | Coal . | Deceased was employed on a colliery surface railway, and was accidentally killed by falling from a locomotive and being run over by a truck. Inspection and inquiry made. |
| 123 | 1st May, 6-45 P.M. | Charanpur Mine, Charanpur P. O., Bengal. | Reliance Coal Co., Ld. . | Munjari Baurin, (f.), 22, <i>Trammer.</i> | Coal . | Deceased, whilst helping to push a loaded tub along a surface tramway, slipped and fell, and was run over by a following tub. She died three hours later. Inspection and inquiry made. |
| 124 | 19th May, 4 A.M. | Joyrampur Mine, Jharia P. O., Bihar and Orissa. | B. R. and Co. . . . | Jiblal Bhuia, (m.), 16, <i>Trammer.</i> | Coal . | As deceased was pushing a tub of coal to the loading wharf, another tub of coal behind him ran away and before he could jump clear, his leg was pinned between the two tubs and fractured. He died two days later in hospital, after the limb had been amputated. Inspection and inquiry made. |
| 125 | 1st August, 10 A.M. | Bokaro-Jharia Mine, Nowagarh P. O., Bihar and Orissa. | Bokaro-Jharia Coalfields, Ld. | Manu Beldar, (m.), 70, <i>Tramming coolie.</i> | Coal . | Whilst deceased and two other persons were pushing a loaded tub on a tram line up a grade of 1 in 50, they were overtaken by another tub being pushed by two other persons. His companions stepped to one side and told him to do so also, but he failed to do so and was crushed between the two tubs. He sustained a spinal injury to which he succumbed two days later. Inspection and inquiry made. |
| 126 | 24th August, 1 A.M. | Douia Mine, Manharpur P. O., Bihar and Orissa. | Bengal Iron and Steel Co., Ld. | Tobo, (m.), 16, <i>Coolie.</i> | Iron Ore . | While moving a loaded tub, deceased slipped and fell and another tub, which was following closely, ran over his left leg. He died five days later. |
| 127 | 21st September, 5-45 P.M. | Kutchi Dhana Mine, Ramkona P. O., Central Provinces. | Indian Manganese Co., Ld. | Fagu Kole, (f.), 13, <i>Coolie.</i> | Manganese . | Deceased was crossing a tram line, while carrying ore. A tub was being pushed by hand and was derailed probably by ore dropped by deceased. She was crushed by the tub and sustained injuries from which she died seven hours later. Inspection and inquiry made. |
| MISCELLANEOUS ON SURFACE.—(47 deaths). | | | | | | |
| 12E | 4th February, Between 2 & 3 A.M. | Bhowra Mine, Jamadoba P. O., Bihar and Orissa. | Eastern Coal Co., Ld. . | Pitamber Rajwar, (m.), 28, Behari Rajwar, (m.), 12, Baikunta Bauri, (m.), 28, Sambhu Bauri, (m.), 25, Allad Bauri, (m.), 13, Putku Bauri, (m.), 26, Sajhu Rajwar, (m.), 50, <i>Miners.</i> | Coal . | The deceased were asleep at night in their huts, which were situated over underground workings. In the middle of the night these workings suddenly collapsed, engulfing the huts. The deceased were buried under the debris of the fallen huts and killed. Inspection and inquiry made. <i>See Report, page 13.</i> |

| | | | | | | |
|-----|--------------------------------------|--|---------------------------|--|---------|---|
| 129 | 11th February, Between 7 & 8 A.M. | Wazunchaung Mine, Tavoy P. O., Burma. | Quah Cheng Guan . | Lakhi Rajwarin, (f.), 16, Mukti Rajwarin, (f.), 16, Dhiri Baurin, (f.), 16, Chandi Baurin, (f.), 15, Meni Baurin, (f.), 32, Thaki Baurin, (f.), 16, Jamuna Baurin, (f.), 12, Fudni Baurin, (f.), 16, Palani Baurin, (f.), 18, <i>Coal-carriers.</i> Bahadur Rajwar, (m.), 6, Bhagi Rajwarin, (f.), 8, Rishi Bauri, (m.), 9, Sristidhar Bauri, (m.), 1, Futi Baurin, (f.), 9, Abinash Bauri, (m.), 1, Baby Baurin, (f.), 6, Mabindi Bauri, (m.), 1. Maung Nu, (m.), 40, <i>Labourer.</i> | Wolfram | Deceased was struck by a falling tree which was blown down by a gale. He was killed instantly. |
| 130 | 21st May, 6 A.M. | Sijua Mine, Sijua P. O., Bihar and Orissa. | Sijua Coal Co., Ltd. . | Rubin Dosadhin, (f.), 45, <i>Bailer woman.</i> | Coal | Deceased's body was found in a tank containing water to a depth of 6 feet. There was no evidence to show how her death was caused. Inspection and inquiry made. |
| 131 | 21st May, 9 A.M. | East Nudkhurki Mine, Nowagarh P. O., Bihar and Orissa. | Auckland Coal Co., Ltd. . | Tuni Bhuiani, (f.), 20, Tenti Bhuiani, (f.), 40, <i>Coal-carriers.</i> | Coal | The two deceased were bathing in an old quarry. One of them went out of her depth and began to sink. The other went to the rescue and also got into deep water. Both were drowned. The top of the quarry was fenced. Inspection and inquiry made. |
| 132 | 16th June, 9-30 A.M. | Kambank Mine, Tavoy P. O., Burma. | Radcliff & Co., Ltd. | Pun Chi, (m.), 52, <i>Coolie.</i> | Wolfram | A hydraulic monitor got out of control and threw the jet near deceased and others working near him. Deceased was thrown against the roof of a bank and sustained injuries through which he died an hour later. |
| 133 | 12th August, 9 A.M. | Wazunchaung Mine, Tavoy P. O., Burma. | Quah Cheng Guan . | Muk Khin, (m.), 27, Phoon Wai, (m.), 26, Chang King, (m.), 27, Lum Shin Tung, (m.), 21, Phun Tung Sang, (m.), 24, Owe Ngi, (m.), 31, Lai Ngi, (m.), 35, Chan Choi Kam, (m.), 20, Chong Hok, (m.), <i>Labourers.</i> | Wolfram | Owing to the bursting of a dam, erected across a river for mining purposes, a flood occurred, and the deceased, who were in their coolie lines, over a mile away, at the time, were swept away and drowned. Inspection and inquiry made. <i>See Report, page 15.</i> |
| 134 | 10th September, 11 P.M. | Nodiha Mine, Dishergarh P. O., Bengal. | Nodiha Coal Co., Ltd. | Jhari Bauri, (m.), 22, <i>Pump khalasi.</i> | Coal | Deceased, whilst working on an electrical transmission pole, received a shock, by reason of the switch in the power house being inadvertently put in. He fell to the ground through a distance of 18 feet, and sustained injuries which resulted in death three days later. Another man working with him was slightly burnt. Inspection and inquiry made. |

APPENDIX II—*contd.*

Fatal Accidents, 1916—*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 wrought. | Cause of accident and remarks. |
|---|------------------------------|--|----------------------------|--|--------------------------|--|
| MISCELLANEOUS ON SURFACE—<i>concl'd.</i> | | | | | | |
| 135 | 22nd September, 4-30 P.M. | Serampur Mine, Giridih P. O., Bihar and Orissa. | East Indian Railway Co. | Kesia Chamin, (f), 14, <i>Coal-carrier.</i> Chamni Chamin, (f), 4, | Coal | The two deceased were walking in a field during a severe cyclone and were struck by a broken low tension electric wire connected with the colliery. Both received a shock and fell into some water and were drowned. Inspection and inquiry made. |
| 136 | 14th October, 10-30 A.M. | Kantapahari Mine, Panuria P. O., Bengal. | Barakar Coal Co., Ltd. | Lab Singh, (m.), 20, <i>Coolie.</i> | Coal | Deceased was crushed against a boiler by a large steel girder. He sustained internal injuries from which he died the following day. Inspection and inquiry made. |
| 137 | 4th November, 3 P.M. | Kambauk Mine, Tavoy P. O., Burma. | Radcliff & Co., Ltd. | Pu Tit, (m.), 30, <i>Coolie.</i> | Wolfram | Deceased was working on the roof of a wolfram godown. He sustained a shock from an electric wire, fell to the ground and was killed. |
| 138 | 4th November, 8-45 P.M. | Bagdiggi Mine, Jharia P. O., Bihar and Orissa. | C. J. Smith | Etvari Mahato, (m.), 35, <i>Trammer.</i> | Coal | As deceased and another trolleyman were pushing an empty tub along a gantry, it derailed and fell from off the gantry. Both men jumped to the ground some 10 feet below. Deceased fell heavily and sustained internal injury, to which he succumbed about two hours later. Inspection and inquiry made. |
| 139 | 20th December, 3 .M. | Kendwadih Mine, Knsunda P. O., Bihar and Orissa. | East Indian Coal Co., Ltd. | Lildhari Dosadh, (m.), 20, <i>Onsetter.</i> | Coal | Deceased was employed as an onsetter at the top of a winding shaft. Being a cold night, he lay down and slept near a coal fire which he had lighted. His clothes caught fire, and he sustained burns to the effects of which he succumbed sixteen days later. Inspection and inquiry made. |
| 140 | 27th December, 5 P.M. | Jogta Mine, Sijua P. O., Bihar and Orissa. | Agabeg Brothers | Tetra Bhuia, (m.), 10, Panwa Bhuiani, (f), 11, <i>Screeners.</i> | Coal | Whilst a number of children were loading small coal at the foot of a heap of coal, 22 feet in height, three of them were buried by small coal rolling down from the heap. When extracted the two deceased were dead. The other child revived after artificial respiration had been applied. Inspection and inquiry made. |

APPENDIX II—contd.

Fatal Accidents, 1916—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 wrought. | Reason for exclusion. | Cause of accident and remarks. |
|--|-----------------------------|--|--|---|--------------------------|---------------------------|---|
| DEATHS NOT INCLUDED IN THE STATISTICS.—(37 deaths). | | | | | | | |
| 1 | 1st January, 11-30 A.M. | Ghusik Mine, Kalipahari P. O., Bengal. | Baliram & Co. | Rama Turi, (m.), 5. | Coal | Not employed | Deceased fell into a boiler feed water tank, which contained water 3'-11" deep, and was drowned. The tank was fenced. Inspection and inquiry made. |
| 2 | 18th January, 1 P.M. | Chowka Mine, (abandoned). | Equitable Coal Co., Ltd. | Unknown, (f.), 6. | Coal | Not employed | Deceased was found drowned in an old shaft. Inspection and inquiry made. |
| 3 | 1st February, | Sowardih Mine, Bhujudih P. O., Bihar and Orissa. | Sowardih Coal Co. | Unknown, (f.), 28. | Coal | Not employed | Deceased's body was found at the bottom of a quarry 67 feet in depth. The fencing on the edge of the quarry was intact. Inspection and inquiry made. |
| 4 | 4th February, 10-30 P.M. | Bejdih Mine, Sitarampur P. O., Bengal. | Equitable Coal Co., Ltd. | Kusumer Bagti, (f.), 6, Chunda Bagti, (f.), 30, <i>Brick-carrier.</i> | Coal | Not a mining accident. | While four members of a family were sleeping in brickmaker's hut, the straw thatch caught fire and the hut was burnt to the ground. The father dragged out his wife and one child, both seriously burned; but, before he could return for the other, the roof collapsed and she was burnt to death. The wife died eight days later. An open fire was burning only 3 feet away at the time and it is thought that a spark was blown on to the thatch. Inspection and inquiry made. |
| 5 | 23rd February, 5 P.M. | Shampur Mine, Nirshachati P. O., Bihar and Orissa. | Shampur Coal Co., Ltd. | Fugri Manjhi, (m.), 50, <i>Miner.</i> | Coal | Not a mining accident. | Deceased, while in a fit, set fire to his clothes with an open lamp. He sustained severe burns to the lower portion of his body, from the effects of which he died twenty-four hours later. Inspection and inquiry made. |
| 6 | 27th March, | Kandri Mine, Ramtek P. O., Central Provinces. | Central Provinces Pros- pecting Syndicate, Ltd. | Bihari Kachi, (m.), 36, <i>Coolie.</i> | Manganese | Not a mining accident. | Deceased fell down a well during the early hours of the morning. He was removed at 6-30 A.M. in an exhausted condition and died at 10 A.M. There was a wall, 4 feet high, round the well. |
| 7 | 28th March, 11 A.M. | An abandoned quarry | — Roy | Borhana Meah, (m.), 14. | Coal | Not employed | Deceased and another child were scraping some fire clay from the back of an old quarry, when the ground above them gave way and some large lumps of earth, measuring up to 3' x 2' x 2', fell upon them. Deceased succumbed to his injuries the same day. Inspection and inquiry made. |
| 8 | 1st April, 9-30 A.M. | Bamankua Mine, Shivrajpur P. O., Bombay. | Bamankua Co., Ltd. | Manganese Dhapi, (f.), 2. | Manganese | Not employed | Deceased who had been left by her mother, crawled under a wagon and dislodged a brake stick placed in position to jam the wheels. The wagon moved a little down the grade crushing her chest and killing her. |

APPENDIX II—contd.

Fatal Accidents, 1916—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 wrought. | Reason for exclusion. | Cause of accident and remarks. |
|---|----------------------------|--|---------------------------------|---|--------------------------|------------------------|--|
| DEATHS NOT INCLUDED IN THE STATISTICS—contd. | | | | | | | |
| 9 | 5th April, 8-30 A.M. | South Kustore Mine, Kustore P. O., Bihar and Orissa. | Raniganj Coal Association, Ltd. | Nazir Meah, (m.), 12, Shale picker. | Coal | Not a mining accident. | Whilst attempting to cross a railway siding during hand shunting operations, deceased was crushed between the buffers of two wagons and killed on the spot. Inspection and inquiry made. |
| 10 | 7th April, 7 A.M. | Dishergarh Mine, Dishergarh P. O., Bengal. | Equitable Coal Co., Ltd. | Rajhu Passi, (m.), 30, Coal cutter. | Coal | Not a mining accident. | Deceased and another man were cooking their food inside a hut. A kerosine lamp was hanging on the wall near some clothing. The lamp set fire to the clothing and ignited the thatched roof. Whilst endeavouring to save the clothes within the hut deceased's own clothes caught fire. He was badly burned and died from the effects eleven days later. Inspection and inquiry made. |
| 11 | About 14th April. | Kendwadih Mine, Kusunda P. O., Bihar and Orissa. | East Indian Coal Co., Ltd. | Dukhia Telin, (f.), 16. | Coal | Not employed | The body of deceased was found at the bottom of an air shaft about 100 feet deep. Inspection and inquiry made. |
| 12 | 27th April, 10 P.M. | Tajuwala Mine, Rawal Pindi P. O., Panjab. | Northern India Coal Co. | Alam Khan, (m.), 22. | Coal | Not employed | Deceased and three other persons were riding on a water tank, which was being hauled up a steep slope by a locomotive. Owing to a jerk, the coupling pin came out and the tank ran backwards down the slope. The other men jumped off, but deceased failed to do so and was crushed between the tank and another tank, standing on the line, 1,000 feet down the slope. He sustained injuries to which he succumbed two days later. Inspection and inquiry made. |
| 13 | 21st May, 12 Noon. | Hariladih Mine, Jharia P. O., Bihar and Orissa. | Equitable Coal Co., Ltd. | Unknown, (f.), 20. | Coal | Not employed | The body of deceased was found floating in water at the bottom of a disused shaft, 38 feet deep. Inspection and inquiry made. |
| 14 | 25th May, 8 A.M. | Sibpur Mine, Charanpur P. O., Bengal. | Katras Jharia Coal Co. | Ful Basia, (f.), 4. | Coal | Not employed | Deceased was playing on a surface tramway, when she was run into by a loaded tub. She received injuries to her head, from which she died a few minutes later. Inspection and inquiry made. |
| 15 | 30th May, 12-30 P.M. | Knordih Mine, Kalipahari P. O., Bengal. | Knordih Coal Co., Ltd. | Rajaram Gope, (m.), 8. | Coal | Not employed | Deceased fell into a water-logged subsidence and was drowned before help could be rendered. Inspection and inquiry made. |
| 16 | 2nd June, 5-15 A.M. | Serampur Mine, Giridih P. O., Bihar and Orissa. | East Indian Railway Co. | Dulia Jolhin, (f.), 70. | Coal | Not employed | Deceased was caught by the footboard of a brake van while attempting to cross the line. She sustained very severe injuries to which she succumbed. |

| | | | | | | | |
|----|------------------------------|--|--------------------------------------|--|-----------|---------------------------|---|
| 17 | 3rd June, 12 Noon. | Sibpur Mine, Charanpur P. O., Bengal. | Katras Jharria Coal Co., Ld. | Khudu Turi, (m.), 6, Sugi Domin, (f.), 30. | Coal | Not employed | The two deceased fell into an old water-logged quarry and were drowned before aid could be rendered. The quarry was securely fenced on all sides. Inspection and inquiry made. |
| 18 | 3rd July, 1-30 P.M. | Baraboni Mine, Asansol P. O., Bengal. | New Beerbhum Coal Co., Ld. | Chattu Rajwar, (m.), 30, Loading coolie. | Coal | Not a mining accident. | Deceased was underneath a main line wagon helping to hand shunt it in a colliery siding. He slipped and fell and was run over by one of the rear wheels. He sustained injuries which necessitated the amputation of his left arm. He died five days later. Inspection and inquiry made. |
| 19 | 13th July, 2-30 P.M. | Charanpur Mine, Charanpur P. O., Bengal. | Apcar & Co. | Dukhi Telin, (f.), 5. | Coal | Not employed | Deceased was crushed between two wagons which were standing on a siding owing to another wagon, which was being shunted, colliding with them. She sustained injuries from which she died two days later. |
| 20 | 8th August, 9 A.M. | Babisole Mine, Raniganj P. O., Bengal. | Bilbera Coal Co., Ld. | Sristy Bauri, (m.), 20, Coolie. | Coal | Not a mining accident. | Deceased jumped off the loading wharf and was run over by a passing train. He sustained injuries from which he died two days later. |
| 21 | 18th August, 8 A.M. | Satak Mine, Dumrikhurd P. O., via Kumptec, Central Provinces. | Byramji Pestonji & Co. | Lahnia, (m.), 45, Barber. | Manganese | Not employed | Deceased was struck down by a tub on a tram line bridge and was killed instantly. |
| 22 | 26th August, 4 P.M. | Barari Mine, Jamadoba P. O., Bihar and Orissa. | East Indian Coal Co., Ld. | Abdul Meah, (m.), 35, Bricklayer. | Coal | Not a mining accident. | Whilst dismantling a building scaffold, 10 feet high, deceased overbalanced and fell backwards on to a heap of bricks, sustaining a spinal injury, to which he succumbed some five weeks later. Inspection and inquiry made. |
| 23 | 1st September, 9 A.M. | Hermyingyi Mine, Tavoy P. O., Burma. | Hermyingyi Mining Co., Ld. | Low Ah Him, (m.), 22, Coolie. | Wolfram | Not a mining accident. | Deceased was struck by a falling tree, which others were felling at the time. He was crushed and killed. |
| 24 | 4th September, 4 P.M. | Saltore Mine, Dishergarh P. O., Bengal. | Saltore Coal Co., Ld. | Unknown, (m.), 30. | Coal | Not employed | Deceased's body was found in the sump of a shaft, 666 feet deep. His skull was fractured, and both legs and arms were broken in several places. The shaft was adequately fenced. |
| 25 | 23rd September, 6 P.M. | Rakha Hills Mine, Rakha Mines P. O., Bihar and Orissa. | Cape Copper Co., Ld. | Vankat Ram, (m.), 23, Timber mistri. | Copper | Not a mining accident. | Whilst another workman was standing on a large stone engaged in erecting an archway under a road the stone became dislodged and crushed deceased killing him instantly. |
| 26 | 29th September, 7-30 A.M. | Kendwadih Mine, Jamadoba P. O., Bihar and Orissa. | Hariladh Coal Co., Ld. | Jung Bahadur Singh, (m.), 34, Trolley man. | Coal | Not a mining accident. | Deceased whilst attempting to descend a well on a rope, fell to the bottom and was drowned. |
| 27 | 8th November, 8-30 A.M. | Ranidih Mine, Mohoda P. O., Bihar and Orissa. | S. N. Mittra | Bhutak Rai, (m.), 2. | Coal | Not employed | Deceased, whilst playing near his mother, who was engaged in carrying ashes near a boiler, fell into a boiler feed water tank and was drowned. The tank was unfenced. Inspection and inquiry made. |
| 28 | 3rd December, 11-30 A.M. | Kambauk Mine, Tavoy P. O., Burma. | Radcliff & Co., Ld. | Chan Kao, (m.), 21, Coolie. | Wolfram | Not a mining accident. | Deceased was killed by the fall of a large tree, which was blown down by the wind. |
| 29 | 17th December, 4 P.M. | Tikuri Mine, Katni P. O., Central Provinces. | Katni Cement and Industrial Co., Ld. | Pani, (f.), 11, Coolie. | Clay | Not employed | Deceased was found drowned in a disused China clay quarry. |

APPENDIX II—*contd.*

Fatal Accidents, 1916—*concl'd.*

| 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 wrought. | Reason for exclusion. | Cause of accident and remarks. |
|--|---|--|----------------------------------|--|--------------------------|---------------------------|---|
| DEATHS NOT INCLUDED IN THE STATISTICS—<i>concl'd.</i> | | | | | | | |
| 30 | 19th December, Between 8 and 9 A.M. | Sukli Mine, Tirodi P. O., Central Provinces. | Central India Mining Co., Ld. | Gulbasia, (f.), 50, <i>Coolie.</i> | Manganese. | Not a mining accident. | Deceased was found drowned in an old excavation. The excavation was fenced. |
| 31 | 23rd December, | Dishergarh Mine, Dishergarh P. O., Bengal. | Equitable Coal Co., Ld. | Unknown, (m.), 40, | Coal | Not employed | Deceased was found dead at the foot of a pole, supporting wires which conveyed electrical current at an E. M. F. of 3,000 volts. Inspection and inquiry made. |
| 32 | 27th December, | Bhulanbarari Mine, Jamudoba P. O., Bihar and Orissa. | Bhulanbarari Coal Co., Ld. | Kasinath Mukherji, (m.), 32, <i>Overman.</i> Joydeb Mukherji (m.), 28, <i>Sirdar.</i> | Coal | Not a mining accident. | The deceased passed the night in a room, closing the two windows and the door and keeping a fire inside. The fumes of the fire overcame them and they were found dead in the morning. |
| 33 | 30th December, 12 Noon. | Scrampur Mine, Giridih P. O., Bihar and Orissa. | East Indian Railway Co. | Alibur Meah, (m.), 5. | Coal | Not employed | Deceased fell into an old shaft containing water and was drowned. The shaft was fenced by a wall 3 feet high. Inspection and inquiry made. |
| 34 | ? | Sunpur Mine, (Abandoned). | Ondal Coal Co., Ld. | Unknown, (f.), ? | Coal | Not employed | Deceased's body was found in a decomposed state at the bottom of an abandoned shaft. There was no evidence to show how she came to be there. The shaft was fenced. |

APPENDIX II—contd.

Table No. 2.

Statement of fatal and serious accidents in and about mines regulated by the Indian Mines Act, 1901, during the year 1916.

| PROVINCE. | District and mineral field. | Total average number of persons employed daily. | FATAL ACCIDENTS. | | | | SERIOUS ACCIDENTS. | | | | DEATH-RATE PER 1,000 PERSONS EMPLOYED. | | | |
|----------------------|------------------------------------|---|-------------------------------------|-------------------|---------------|---------------|--|--------------------------------------|---------------|----------------------------------|--|---------------|-------------------------|------|
| | | | Number of accurate fatal accidents. | NUMBER OF DEATHS. | | | Number of serious non-fatal accidents. | NUMBER OF PERSONS SERIOUSLY INJURED. | | | Below ground. | Above ground. | Below and above ground. | |
| | | | | Below ground. | Above ground. | Total deaths. | | Below ground. | Above ground. | Total number of persons injured. | | | | |
| A.—COAL. | | | | | | | | | | | | | | |
| Assam | Lakhimpur | 2,611 | 8 | 8 | ... | 8 | 75 | 72 | 6 | 78 | 4.43 | ... | 3.06 | |
| | Naga Hills | 183 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | |
| | TOTAL | 2,794 | 8 | 8 | ... | 8 | 75 | 72 | 6 | 78 | 4.31 | ... | 2.86 | |
| Baluchistan | Kalat | 96 | 1 | 1 | ... | 1 | ... | ... | ... | ... | 18.18 | ... | 10.42 | |
| | Loralai, Loralai | 20 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | |
| | Quetta, Pishin | 127 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | |
| | Sibi, Khost, etc. | 868 | 2 | 2 | ... | 2 | 4 | 4 | ... | 4 | 3.70 | ... | 2.30 | |
| TOTAL | 1,111 | 3 | 3 | ... | 3 | 4 | 4 | ... | 4 | 4.32 | ... | 2.70 | | |
| Bengal | Bankura, Raniganj | 104 | 1 | 1 | ... | 1 | ... | ... | ... | ... | 15.87 | ... | 9.62 | |
| | Birbhum " | 29 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | |
| | Burdwan " | 42,907 | 32 | 57 | 2 | 59 | 48 | 38 | 12 | 50 | 2.05 | .13 | 1.38 | |
| | TOTAL | 43,040 | 33 | 58 | 2 | 60 | 48 | 38 | 12 | 50 | 2.08 | .13 | 1.39 | |
| Bihar and Orissa | Hazaribagh { | Bokaro-Ramgarh | 2,058 | 1 | ... | 1 | 1 | 7 | 1 | 6 | 7 | ... | 2.09 | .49 |
| | | Giridih | 9,976 | 8 | 7 | 3 | 10 | 21 | 15 | 6 | 21 | 1.00 | 1.01 | 1.00 |
| | | Jharia | 397 | 1 | 1 | ... | 1 | 1 | 1 | ... | 1 | 4.18 | ... | 2.53 |
| | Maubhum, Jharia | 71,575 | 50 | 45 | 34 | 79 | 56 | 45 | 15 | 60 | 1.00 | 1.27 | 1.10 | |
| | " Raniganj | 5,689 | 6 | 5 | 1 | 6 | 2 | 1 | 1 | 2 | 1.46 | .44 | 1.05 | |
| | Palamanu, Daltonganj | 812 | ... | ... | ... | ... | 2 | 1 | 1 | 2 | ... | ... | ... | |
| | Sambalpur, Hingir-Rampur | 754 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | |
| | Sonthal Parganas, Jainty | 575 | ... | ... | ... | ... | 1 | 1 | ... | 1 | ... | ... | ... | |
| " Raniganj | 64 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | | |
| TOTAL | 91,900 | 66 | 58 | 39 | 97 | 90 | 65 | 29 | 94 | .99 | 1.16 | 1.06 | | |
| Burma | Bhamo | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | |
| Central Provinces | Chanda, Ballarpur | 800 | ... | ... | ... | ... | 2 | 2 | ... | 2 | ... | ... | ... | |
| | Chhindwara, Pench Valley | 1,477 | 1 | 1 | ... | 1 | 3 | 3 | ... | 3 | .92 | ... | .68 | |
| | Narsinghpur, Mohpani | 1,188 | ... | ... | ... | ... | 1 | ... | 1 | 1 | ... | ... | ... | |
| | Yeotmal | 3 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | |
| TOTAL | 3,558 | 1 | 1 | ... | 1 | 6 | 5 | 1 | 6 | .42 | ... | .28 | | |
| North-West Province. | Frontier Hazara | 7 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | |
| Panjab | Jhelum | 943 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | |
| | Mianwali | 15 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | |
| | Shahpur | 91 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | |
| TOTAL | 1,049 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | | |
| GRAND TOTAL (COAL) | | 143,459 | 111 | 128 | 41 | 169 | 223 | 184 | 48 | 232 | 1.39 | .79 | 1.18 | |

APPENDIX II—contd.

Table No. 2—contd.

Statement of fatal and serious accidents in and about mines regulated by the Indian Mines Act, 1901, during the year 1916—contd.

| PROVINCE. | District and mineral field. | Total average number of persons employed daily. | FATAL ACCIDENTS. | | | | SERIOUS ACCIDENTS. | | | DEATH-RATE PER 1,000 PERSONS EMPLOYED. | | |
|-----------------------------|--|---|-------------------------------------|-------------------|---------------|---------------|--|--------------------------------------|---------------|--|---------------|-------------------------|
| | | | Number of separate fatal accidents. | NUMBER OF DEATHS. | | | Number of serious non-fatal accidents. | NUMBER OF PERSONS SERIOUSLY INJURED. | | Below ground. | Above ground. | Below and above ground. |
| | | | | Below ground. | Above ground. | Total deaths. | | Below ground. | Above ground. | | | |
| B.—MICA. | | | | | | | | | | | | |
| Bihar and Orissa | Bhagalpur | 23 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | Gaya | 1,800 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | Hazaribagh | 9,643 | 2 | 2 | ... | 2 | 4 | 5 | ... | 5 | 32 | 21 |
| | Monghyr | 374 | ... | ... | ... | ... | 1 | 3 | ... | 3 | ... | ... |
| | TOTAL | 11,930 | 2 | 2 | ... | 2 | 5 | 8 | ... | 8 | 26 | 17 |
| Madras | Nellore | 4,201 | ... | ... | ... | ... | 2 | 3 | ... | 3 | ... | ... |
| | Salem | 53 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | TOTAL | 4,254 | ... | ... | ... | ... | 2 | 3 | ... | 3 | ... | ... |
| Rajputana | Ajmer-Merwara | 299 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | Nasirabad | 8 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | TOTAL | 307 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | GRAND TOTAL (MICA) | 16,491 | 2 | 2 | ... | 2 | 7 | 11 | ... | 11 | 18 | 12 |
| C.—MANGANESE. | | | | | | | | | | | | |
| Bombay | Belgaum | 208 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | Panch Mahals | 1,564 | ... | ... | ... | ... | 4 | ... | 4 | 4 | ... | ... |
| | TOTAL | 1,772 | ... | ... | ... | ... | 4 | ... | 4 | 4 | ... | ... |
| Central Provinces | Balaghat | 5,677 | ... | ... | ... | ... | 5 | ... | 5 | 5 | ... | ... |
| | Bhandara | 1,856 | ... | ... | ... | ... | 1 | ... | 1 | 1 | ... | ... |
| | Chhindwara | 1,642 | 4 | 3 | 1 | 4 | 2 | ... | 2 | 2 | 2.16 | 3.93 |
| | Jabalpur | 14 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | Nagpur | 4,284 | 1 | 1 | ... | 1 | 1 | ... | 1 | 1 | 32 | 23 |
| | TOTAL | 13,473 | 5 | 4 | 1 | 5 | 9 | ... | 9 | 9 | 38 | 34 |
| Madras | Viragapatam | 293 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | GRAND TOTAL (MANGANESE) | 15,538 | 5 | 4 | 1 | 5 | 13 | ... | 13 | 13 | 33 | 30 |
| D.—LIMESTONE. | | | | | | | | | | | | |
| Central Provinces | Jabalpur-Katni | 1,525 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Panjab | Hoshiarpur | 104 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | GRAND TOTAL (LIMESTONE) | 1,629 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| E.—SALT. | | | | | | | | | | | | |
| Panjab | Jhelum | 697 | 1 | 1 | ... | 1 | 9 | 7 | 2 | 9 | 1.55 | 1.43 |
| | Mianwali | 77 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | Shahpur | 53 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | GRAND TOTAL (SALT) | 827 | 1 | 1 | ... | 1 | 9 | 7 | 2 | 9 | 1.29 | 1.21 |

APPENDIX II—contd.

Table No. 2—contd.

Statement of fatal and serious accidents in and about mines regulated by the Indian Mines Act, 1901, during the year 1916—contd.

| PROVINCE. | District and mineral field. | Total average number of persons employed daily. | FATAL ACCIDENTS. | | | SERIOUS ACCIDENTS. | | | DEATH-RATE PER 1,000 PERSONS EMPLOYED. | | | | |
|-----------------------------|--------------------------------|---|-------------------------------------|-------------------|---------------|--|--------------------------------------|---------------|--|---------------|-------------------------|---------------|----------------------------------|
| | | | Number of separate fatal accidents. | NUMBER OF DEATHS. | | Number of serious non-fatal accidents. | NUMBER OF PERSONS SERIOUSLY INJURED. | | Below ground. | Above ground. | Below and above ground. | | |
| | | | | Below ground. | Above ground. | | Total deaths. | Below ground. | | | | Above ground. | Total number of persons injured. |
| F.—GEMS. | | | | | | | | | | | | | |
| Burma | Mogok (Rubies, etc.) | 1,202 | 1 | ... | 1 | 1 | 2 | 2 | ... | 2 | ... | 1.84 | .83 |
| G.—SLATE. | | | | | | | | | | | | | |
| Bihar and Orissa | Monghyr | 229 | ... | ... | ... | ... | 1 | ... | 1 | 1 | ... | ... | ... |
| Panjab | Gurdaspur | 17 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | Gurgaon | 130 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | Kangra | 369 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | TOTAL | 516 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| GRAND TOTAL (SLATE) | | 745 | ... | ... | ... | ... | 1 | ... | 1 | 1 | ... | ... | ... |
| H.—GOLD. | | | | | | | | | | | | | |
| Bihar and Orissa | Singbhum | 117 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Madras | Anantapur | 1,937 | 4 | 4 | ... | 4 | 4 | 1 | 3 | 4 | 4.30 | ... | 2.07 |
| GRAND TOTAL (GOLD) | | 2,054 | 4 | 4 | ... | 4 | 4 | 1 | 3 | 4 | 4.07 | ... | .39 |
| I.—IRON ORE. | | | | | | | | | | | | | |
| Bihar and Orissa | Puri | 19 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | Singbhum | 1,072 | 2 | 1 | 1 | 2 | 2 | ... | 2 | 2 | 1.25 | 3.67 | 1.87 |
| | TOTAL | 1,091 | 2 | 1 | 1 | 2 | 2 | ... | 2 | 2 | 1.25 | 3.44 | 1.83 |
| Central Provinces | Jabalpur | 74 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| GRAND TOTAL (IRON ORE) | | 1,165 | 2 | 1 | 1 | 2 | 2 | ... | 2 | 2 | 1.25 | 2.74 | 1.72 |
| J.—WOLFRAM. | | | | | | | | | | | | | |
| Bihar and Orissa | Singbhum | 60 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Bihar | Mergui | 301 | 1 | 1 | ... | 1 | 2 | 2 | ... | 2 | 5.00 | ... | 3.32 |
| | Tavoy | 7,576 | 12 | 8 | 12 | 20 | 17 | 8 | 9 | 17 | 2.19 | 3.05 | 2.64 |
| | Thaton | 702 | ... | ... | ... | ... | 1 | 1 | ... | 1 | ... | ... | ... |
| | TOTAL | 8,579 | 13 | 9 | 12 | 21 | 20 | 11 | 9 | 20 | 2.5 | 2.87 | 2.45 |
| Central Provinces | Nagpur | 21 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| GRAND TOTAL (WOLFRAM). | | 8,600 | 13 | 9 | 12 | 21 | 20 | 11 | 9 | 20 | 2.03 | 2.84 | 2.42 |
| K.—MAGNESITE. | | | | | | | | | | | | | |
| Madras | Salem | 1,440 | ... | ... | ... | ... | 1 | ... | 1 | 1 | ... | ... | ... |

APPENDIX II—contd.

Table No. 2—contd.

Statement of fatal and serious accidents in and about mines regulated by the Indian Mines Act, 1901, during the year 1916—contd.

| PROVINCS. | District and mineral field. | Total average number of persons employed daily. | FATAL ACCIDENTS. | | | SERIOUS ACCIDENTS. | | | DEATH-RATE PER 1,000 PERSONS EMPLOYED. | | |
|-----------------------------|-----------------------------|---|-------------------------------------|-------------------|---------------|--|--------------------------------------|---------------|--|---------------|-------------------------|
| | | | Number of separate fatal accidents. | NUMBER OF DEATHS. | | Number of serious non-fatal accidents. | NUMBER OF PERSONS SERIOUSLY INJURED. | | Below ground. | Above ground. | Below and above ground. |
| | | | | Below ground. | Above ground. | | Total deaths. | Below ground. | | | |
| L.—CHROMITE. | | | | | | | | | | | |
| Baluchistan | Quetta-Pishin | 35 | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | Zhob | 439 | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | TOTAL | 474 | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Bihar and Orissa | Singbhum | 423 | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| GRAND TOTAL (CHROMITE) | | 897 | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| M.—COPPER ORE. | | | | | | | | | | | |
| Bihar and Orissa | Singbhum | 962 | ... | ... | ... | 1 | ... | 1 | 1 | ... | ... |
| Burma | Katha | 35 | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | Kyaukse | 80 | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | Lower Chindwin | 168 | 1 | 1 | ... | 1 | ... | ... | ... | 7.81 | 5.95 |
| TOTAL | | 253 | 1 | 1 | ... | 1 | ... | ... | ... | 5.65 | 3.53 |
| GRAND TOTAL (COPPER) | | 1,245 | 1 | 1 | ... | 1 | ... | 1 | 1 | 2.90 | .80 |
| N.—BAUXITE. | | | | | | | | | | | |
| Central Provinces | Jabalpur | 39 | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| O.—CLAY. | | | | | | | | | | | |
| Bihar and Orissa | Manbhum | 62 | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | Palamu | 31 | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | TOTAL | 93 | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Central Provinces | Jabalpur | 288 | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| GRAND TOTAL (CLAY) | | 381 | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| P.—GALENA. | | | | | | | | | | | |
| Central Provinces | Drug | 57 | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Q.—TIN. | | | | | | | | | | | |
| Bihar and Orissa | Hazaribagh | 3 | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Burma | Mergui (Maliwan) | 52 | ... | ... | ... | 1 | ... | 1 | 1 | ... | ... |
| | Tavoy | 70 | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | Thaton | 1,500 | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| TOTAL | | 1,622 | ... | ... | ... | 1 | ... | 1 | 1 | ... | ... |
| GRAND TOTAL (TIN) | | 1,625 | ... | ... | ... | 1 | ... | 1 | 1 | ... | ... |

APPENDIX II—contd.

Table No. 2—concl'd.

Statement of fatal and serious accidents in and about mines regulated by the Indian Mines Act, 1901, during the year 1916—concl'd.

| PROVINCES. | District and mineral field. | Total average number of persons employed daily. | FATAL ACCIDENTS. | | | SERIOUS ACCIDENTS. | | | DEATH-RATE PER 1,000 PERSONS EMPLOYED. | | | | |
|-----------------------------|--------------------------------|---|-------------------------------------|-------------------|---------------|--|--------------------------------------|---------------|--|---------------|---------------|-------------------------|---------------|
| | | | Number of separate fatal accidents. | NUMBER OF DEATHS. | | Number of serious non-fatal accidents. | NUMBER OF PERSONS SERIOUSLY INJURED. | | Total number of persons injured. | Below ground. | Above ground. | Below and above ground. | |
| | | | | Below ground. | Above ground. | | Total deaths. | Below ground. | | | | | Above ground. |
| R.—STEATITE. | | | | | | | | | | | | | |
| Central Provinces | Jabalpur | 281 | .. | ... | ... | ... | ... | ... | ... | ... | ... | ... | |
| Madras | Kurnool | 17 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | |
| | GRAND TOTAL (STEATITE). | 298 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | |
| S.—FULLER'S EARTH. | | | | | | | | | | | | | |
| Central Provinces | Jabalpur | * | ... | .. | ... | ... | ... | ... | ... | ... | ... | ... | |
| T.—SILVER. | | | | | | | | | | | | | |
| Madras | Anantapur | † ... | ... | ... | .. | ... | ... | ... | ... | ... | ... | ... | |
| U.—GRAPHITE. | | | | | | | | | | | | | |
| Rajputana | Ajmer-Merwara | 152 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | |
| V.—MOLYBDENITE. | | | | | | | | | | | | | |
| Burma | Tavoy | 15 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | |
| W.—TITANIUM. | | | | | | | | | | | | | |
| Burma | Thaton | ‡ ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | |
| | GRAND TOTAL (ALL MINES) | 197,919 | 140 | 150 | 56 | 206 | 284 | 216 | 81 | 297 | 1.18 | .79 | 1.04 |

* Figures included with those of Jabalpur limestones.

† Won from Anantapur gold mines.

‡ Figures included with those of Thaton wolfram mines.

APPENDIX II—contd.

Table No. 3.

Statement of fatal accidents in mines regulated by the Indian Mines Act, 1901, during the year 1915, classified according to the age and sex of the workers.

| MINERAL. | PROVINCE AND MINERAL FIELD. | Number of separate fatal accidents. | NUMBER OF DEATHS. | | | | | | | | TOTAL BELOW AND ABOVE GROUND. | |
|---|--|-------------------------------------|-------------------|----------------|----------------------|--------|---------------|----------------|----------------------|--------|-------------------------------|----|
| | | | BELOW GROUND. | | | | ABOVE GROUND. | | | | | |
| | | | Adult males. | Adult females. | Children (under 13). | TOTAL. | Adult males. | Adult females. | Children (under 13). | TOTAL. | | |
| COAL | Assam, Lakhimpur | 8 | 7 | 1 | ... | 8 | ... | ... | ... | ... | 8 | |
| | Baluchistan { | Kalat | 1 | 1 | ... | ... | 1 | ... | ... | ... | ... | 1 |
| | | Sibi | 2 | 2 | ... | ... | 2 | ... | ... | ... | ... | 2 |
| | TOTAL BALUCHISTAN | | 3 | 3 | ... | ... | 3 | ... | ... | ... | ... | 3 |
| | Bengal, Raniganj | 33 | 54 | 4 | ... | 58 | 1 | 1 | ... | 2 | 60 | |
| | Bihar and Orissa. { | Bokaro-Rainagarh | 1 | ... | ... | ... | ... | 1 | ... | ... | 1 | 1 |
| | | Giridih | 8 | 4 | 3 | ... | 7 | 1 | 1 | 1 | 3 | 10 |
| | | Jharis, Hazaribagh | 1 | 1 | ... | ... | 1 | ... | ... | ... | ... | 1 |
| | | Jharis, Manbhum | 50 | 38 | 7 | ... | 45 | 12 | 12 | 10 | 34 | 79 |
| | | Manbhum, Raniganj | 6 | 3 | 2 | ... | 5 | 1 | ... | ... | 1 | 6 |
| | TOTAL BIHAR AND ORISSA. | | 66 | 46 | 12 | ... | 58 | 15 | 13 | 11 | 39 | 97 |
| Central Provinces, Chhindwara | 1 | 1 | ... | ... | 1 | ... | ... | ... | ... | ... | 1 | |
| TOTAL COAL | | 111 | 111 | 17 | ... | 128 | 16 | 14 | 11 | 41 | 169 | |
| MICA | Bihar and Orissa, Hazaribagh | 2 | 2 | ... | ... | 2 | ... | ... | ... | ... | 2 | |
| | TOTAL MICA | | 2 | 2 | ... | ... | 2 | ... | ... | ... | ... | 2 |
| MANGANESE | Central Provinces { | Chhindwara | 4 | 3 | ... | ... | 3 | ... | 1 | ... | 1 | 4 |
| | | Nagpur | 1 | ... | 1 | ... | 1 | ... | ... | ... | ... | 1 |
| | TOTAL MANGANESE | | 5 | 3 | 1 | ... | 4 | ... | 1 | ... | 1 | 5 |
| SALT | Punjab | 1 | 1 | ... | ... | 1 | ... | ... | ... | ... | 1 | |
| GWSS | Burma (Mogok) | 1 | ... | ... | ... | ... | 1 | ... | ... | 1 | 1 | |
| GOLD | Madras | 4 | 4 | ... | ... | 4 | ... | ... | ... | ... | 4 | |
| IRON ORE | Bihar and Orissa, Singhbhum | 2 | ... | ... | 1 | 1 | 1 | ... | ... | 1 | 2 | |
| WOLFRAM | Burma { | Mergui | 1 | 1 | ... | ... | 1 | ... | ... | ... | 1 | |
| | | Tavoy | 12 | 8 | ... | ... | 8 | 12 | ... | ... | 12 | 20 |
| | TOTAL WOLFRAM | | 13 | 9 | ... | ... | 9 | 12 | ... | ... | 12 | 21 |
| COPPER ORE | Burma | 1 | 1 | ... | ... | 1 | 1 | ... | ... | ... | 1 | |
| GRAND TOTAL (ALL MINERALS) | | 140 | 131 | 18 | 1 | 150 | 30 | 15 | 11 | 56 | 206 | |

APPENDIX II—concl'd.

Table No. 4.

Statement of fatal accidents in mines regulated by the Indian Mines Act, 1901, during the year 1915, 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 of fire-damp. | Falls of roof. | Falls of side. | In shafts. | Suffocation by gases. | By explosives. | Eruptions of water or falling into water. | Hanging. | Miscellaneous below ground. | Surface. | Total deaths. | Below ground. | Above ground. | Below and above ground. |
| Coal | 111 | 14 | 46 | 21 | 25 | ... | 1 | 3 | 12 | 6 | 41 | 169 | 1.39 | .79 | 1.18 |
| Mica | 2 | ... | ... | 2 | ... | ... | ... | ... | ... | ... | ... | 2 | .18 | ... | .13 |
| Manganese | 5 | ... | ... | 3 | ... | ... | 1 | ... | ... | ... | 1 | 5 | .93 | .30 | .32 |
| Salt | 1 | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | 1 | 1.20 | ... | 1.21 |
| Gems | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 | ... | 1.84 | .83 |
| Gold | 4 | ... | ... | 1 | 3 | ... | ... | ... | ... | ... | ... | 4 | 4.07 | ... | .39 |
| Iron | 2 | ... | ... | 1 | ... | ... | ... | ... | ... | ... | 1 | 2 | 1.25 | 2.74 | 1.72 |
| Wolfram | 13 | ... | ... | 7 | ... | ... | 2 | ... | ... | ... | 12 | 21 | 2.03 | 2.84 | 2.42 |
| Copper | 1 | ... | ... | ... | 1 | ... | ... | ... | ... | ... | ... | 1 | 2.90 | ... | .80 |
| TOTAL 1916 | 140 | 14 | 46 | 35 | 29 | ... | 4 | 3 | 12 | 7 | 56 | 206 | 1.18 | .79 | 1.04 |
| TOTAL PRECEDING YEAR. | 163 | 1 | 51 | 42 | 17 | ... | 7 | 3 | 17 | 13 | 37 | 188 | 1.23 | .60 | 1.04 |
| DIFFERENCE | -23 | +13 | -5 | -7 | +12 | ... | -3 | ... | -5 | -6 | +19 | +18 | -.05 | +19 | ... |

APPENDIX III.

PROSECUTIONS UNDER THE MINES ACT.

Statement of prosecutions instituted under the Indian Mines Act, 1901, during the year 1916.

| PROVINCE. | District. | Number of prosecutions. | Number of persons prosecuted. | Number convicted. | Numbers of rules and sections of the Act contravened. | REMARKS. |
|------------------|------------|-------------------------|-------------------------------|-------------------|---|---------------------------------|
| Bengal | Burdwan | 1 | 1 | 1 | Section 20, Rule 1 (a), of Notification No. 864-68-20, dated 10th March 1904, and Rule 50 of Notification No. 2968-82, dated 21st April 1906. | Proceedings instituted in 1915. |
| Bihar and Orissa | Manbhum | 1 | 2 | 2 | Section 20, Rules 1, 3 and 7 of Notification No. 864-68-20, dated 10th March 1904. | |
| Madras | Nellore | 1 | 1 | ... | Section 20, Rule 1 of Notification No. 11793-103, dated 30th December 1908. | Warned. |
| Bihar and Orissa | Hazaribagh | 1 | 1 | 1 | Ditto ditto | |
| | Do. | 1 | 2 | 2 | Ditto ditto | |
| | Do. | 1 | 2 | 2 | Ditto ditto | |
| | Do. | 1 | 2 | ... | Ditto ditto | Acquitted. |
| Bengal | Burdwan | 1 | 1 | 1 | Ditto ditto | |
| | Do. | 1 | 1 | 1 | Ditto ditto | |
| Bihar and Orissa | Manbhum | 1 | 2 | 2 | Ditto ditto | |
| | Do. | 1 | 1 | ... | Ditto ditto | Acquitted. |
| | Do. | 1 | 3 | ... | Ditto ditto | Not tried in 1916. |
| | Do. | 1 | 3 | 2 | Section 20, Rule 12 of Notification No. 864-68-20, dated 10th March 1904. | |
| | Do. | 1 | 2 | 2 | Section 20, Rule 1 of Notification No. 11793-103, dated 30th December 1908. | |
| | Do. | 1 | 1 | ... | Ditto ditto | Absconded. |
| | Do. | 1 | 1 | ... | Ditto ditto | Acquitted. |
| | Do. | 1 | 2 | 2 | Ditto ditto | |
| | Do. | 1 | 1 | 1 | Section 20, Rule 12 of Notification No. 864-68-20, dated 10th March 1904. | |
| | Do. | 1 | 1 | 1 | Section 13 (1) of the Indian Mines Act, 1901. | |
| Bengal | Burdwan | 1 | 1 | 1 | Section 15 of the Indian Mines Act, 1901, and Section 20 of Rules 2 (b) and 2 (c) of Notification No. 864-68-20, dated 10th March 1904. | |
| | Do. | 1 | 1 | 1 | Ditto ditto | |
| Bihar and Orissa | Manbhum | 1 | 1 | 1 | Section 20, Rule 19 of Notification No. 864-68-20, dated 10th March 1904. | |
| | Do. | 1 | 1 | 1 | Ditto ditto | |
| | Do. | 1 | 1 | 1 | Ditto ditto | |
| | Do. | 1 | 1 | 1 | Ditto ditto | |
| Madras | Nellore | 1 | 1 | 1 | Ditto ditto | |
| Bihar and Orissa | Manbhum | 1 | 3 | ... | Section 20, Rule 21 of Notification No. 6436-162, dated 2nd September 1911. | |
| | Do. | 1 | 2 | ... | Section 20, Rule 12 of Notification No. 864-68-20, dated 10th March 1904. | Not tried in 1916. |
| | Do. | 1 | 3 | ... | Section 15 (2) of the Indian Mines Act, 1901. | Not tried in 1916. |
| | | | | | Section 20, Rule 12 of Notification No. 864-68-20, dated 10th March 1904. | Not tried in 1916. |

APPENDIX IV.
MISCELLANEOUS.

Statement No. 1.

List of Inspection Circles.

| No. 1 Circle. | No. 2 Circle. |
|--|---|
| 1. 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 Baluchistan. 3. All mines in the North-West Frontier Province. 4. All mines in the Panjab. 5. All mines in Rajputana. 6. All mines in Assam. | 1. All mines in Bengal. 2. Such mines in Bihar and Orissa as line 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. 3. All mines in Bombay. 4. All mines in the Central Provinces. 5. All mines in Madras. 6. All mines in Burma. |

Statement No. 2.

List of holders of certificates as managers of coal mines in British India.

(a) Certificates granted to holders of English Certificates of competency.

FIRST CLASS.

| NAME. | No. of Indian certificate. | Date of Indian certificate. | No. of English certificate. | Date of English certificate. |
|----------------------------|----------------------------|-----------------------------|-----------------------------|------------------------------|
| Russell, James | 205 | 4th February 1916 . | 152 | 30th July 1914. |
| Pollock, John | 206 | Ditto | 3624 | 9th June 1910. |
| Cooper, Horace | 207 | 27th November 1916 . | 3481 | 22nd July 1909. |
| Evans, Richard | 208 | Ditto | 204 | 22nd July 1915. |
| Farquhar, Andrew | 209 | Ditto | 47 | 30th July 1913. |

(b) Certificates of competency.

FIRST CLASS.

| NAME. | No. of certificate. | Date of certificate. | REMARKS. |
|--|---------------------|----------------------|----------|
| Barrowman, Alexander | 83 | 30th March 1916. | |
| Bapty, Frederick | 84 | Ditto | |
| Greer-Spencer, Benjamin | 85 | Ditto | |
| Nag, Hemanta Kumar | 86 | Ditto | |
| Lawton, Henry | 87 | Ditto | |
| Hunter, Roger Joseph | 88 | Ditto | |
| Penfold, Douglas Kent | 89 | Ditto | |
| Hunter, George | 90 | Ditto | |
| Payne, James Harold Willoughby | 91 | Ditto | |

APPENDIX IV—*contd.*MISCELLANEOUS—*contd.*Statement No. 2—*concl'd.*List of holders of certificates as managers of coal mines in British India—*concl'd.*(b) Certificates of competency—*concl'd.*

SECOND CLASS.

| NAME. | No. of certificate. | Date of certificate. | REMARKS. |
|---|---------------------|----------------------|----------|
| Grieveson, Thomas John | 118 | 30th March 1916. | |
| Adamson, Bertram | 119 | Ditto. | |
| Mukherji, Probodh Chandra | 120 | Ditto. | |
| Mehta, Sant Ram | 121 | Ditto. | |
| Roy, Upendra Nath | 122 | Ditto. | |
| Mitra, Surendra Chandra | 123 | Ditto. | |
| Sen, Dharendra Nath | 124 | Ditto. | |
| Slatter, Robert Anderson Foxcroft | 125 | Ditto. | |
| Cowan, William Barrington | 126 | Ditto. | |
| Ghose, Hari Prasanna | 127 | Ditto. | |
| Basu, Hara Kali | 128 | Ditto. | |
| Pal, Shib Narayan | 129 | Ditto. | |
| Sanyal, Bhupati Bhusan | 130 | Ditto. | |
| Chakravarty, Profulla Ranjan | 131 | Ditto. | |
| Roy Chowdhury, Abala Bandhu | 132 | Ditto. | |

(c) Certificates of service.

FIRST CLASS.

| NAME. | No. of certificate. | Date of certificate. | REMARKS. |
|--------------------------------|---------------------|----------------------|----------|
| Loving, Osmond Davis | 139 | 4th February 1916. | |
| Ramjidass Cacker | 140 | Ditto. | |

APPENDIX IV—*contd.*MISCELLANEOUS—*contd.*

Statement No. 3.

List of Universities and Colleges approved by the Governor-General in Council for the purposes of Rules 32 and 33 under the Indian Mines Act, 1901.

| Name of Institution and Degree or Diploma. | Date. |
|--|----------------------|
| University of Birmingham in respect of its Degree of B.Sc. in Mining and Diploma in Mining. | 11th June 1904. |
| University College of Bristol in respect of its Senior Diploma in Mining. | 16th September 1904. |
| University of Cambridge in respect of its Diploma in Mining Engineering. | 6th June 1905. |
| University of Durham in respect of its Degree of B.Sc. in Mining | 21st December 1903. |
| Durham College of Science in respect of its Diploma in Mining . | 29th June 1904. |
| University of Glasgow in respect of its Degree and Diploma in Mining. | 25th September 1904. |
| Glasgow and West of Scotland Technical College in respect of its Diploma in Mining. | 28th June 1904. |
| University of Leeds in respect of its Degree of B.Sc. in Mining and Diploma in Mining. | 21st November 1904. |
| University of London in respect of its B.Sc. Degree in Mining for Internal Students, subject to the Degree being endorsed by the University with a certificate of four months' practical experience in a mine. | 9th June 1905. |
| University of London in respect of its B.Sc. Degree in Mining for External Students, subject to the Degree being endorsed by the University with a certificate of four months' practical experience in a mine. | 7th August 1906. |
| Royal School of Mines in respect of its Associateship in Mining . | 24th March 1904. |
| University of Oxford in respect of its Diploma B. for Colliery Engineers (in Scientific Engineering and Mining subjects). | 11th February 1905. |
| University College of Sheffield in respect of its Diploma in Mining. | 15th July 1904. |
| University College of South Wales and Monmouthshire in respect of its Diploma in Mining. | 19th April 1904. |
| Wigan Mining and Technical College in respect of its Diploma in Mining. | 26th August 1904. |
| Civil Engineering College, Sibpur, in respect of its Diploma in Mining. | 22nd February 1907. |
| Merchant Venturers' Technical College, Bristol, in respect of its Diploma in Mining Engineering. | 5th October 1905. |
| Victoria University of Manchester in respect of its Degree and Certificate of Mining. | 14th February 1906. |
| University College of Nottingham in respect of its Diploma in Mining Engineering. | 28th March 1906. |
| University of Sheffield in respect of its Degree of Bachelor of Engineering (Mining). | 30th June 1906. |
| Heriot-Watt College in respect of its Certificate in Mining Engineering. | 16th January 1908. |
| Calcutta University in respect of its Degree of Bachelor of Engineering in the branch of Mining Engineering. | 24th September 1910. |
| Harvard University, Cambridge, Massachusetts, in respect of its Diploma in Mining Engineering. | 22nd February 1913. |
| Columbia University, New York, in respect of its Degree of Engineer of Mines. | 13th March 1915. |
| California University, United States of America, in respect of its Degree of Mining Engineer. | 19th February 1916. |
| Pittsburg University, United States of America, in respect of its Degree of Engineer of Mines. | 19th February 1916. |

APPENDIX IV—*contd.*MISCELLANEOUS—*contd.*

Statement No. 4.

SIBPUR COLLEGE.

THE MINING CLASSES.

CIRCULAR.

A course for the Diploma in the "Principles of Mining" is offered.

The course of instruction is designed to afford theoretical training in the Principles of Mining generally, to prepare students for positions of responsibility on coal or metal mines, and in the case of students attending for instruction in coal-mining, to qualify them to appear at the examinations for mine managers as required by the Indian Mines Act. Students who obtain the College Diploma may be granted a reduction of two years in the qualifying period of practical work in a coal mine required of candidates for a colliery manager's certificate.

ARRANGEMENT OF CLASSES AND SESSIONS.

First or Preliminary year.—Admissions about the end of January to this year, in which Mechanical, Electrical and Mining students are taught together. The session lasts for about 14 months.

Second or Junior year.—Promotion to this class in April. Civil Engineering students who passed the Sub-Overseer examination are also admitted to the Mining classes at this stage.

Third or Senior year.—Promotion to this class in April. The examination for the Diploma in Mining is held at the end of this year.

(The possession of a certificate gives the holder no claim to any appointment under Government.

The course covers three years (all at the College), preparing students for the examination for the Government Diploma in the "Principles of Mining." The first or Preliminary year is common to the course in Mechanical and Electrical Engineering. Specialized instruction in Mining is offered only in the last two years, during which six weeks is spent each year in learning practical Mine Surveying and in visiting collieries.

Admission to the Mechanical and Electrical Engineering and Mining Courses.—Admission to the first or Preliminary year of the Mechanical and Electrical Engineering and Mining Courses is made on the third Monday in January. Candidates must be qualified, as laid down above, for admission to the first year of the Sub-Overseer classes (B Final certificate-holders are admitted only to the first or Preliminary year of the Mechanical and Electrical and Mining Courses).

Applications must be received at the Principal's office by the first day in January.

Age.—No one over 20 years of age on 1st January of year of admission will be admitted to the Mining and Mechanical and Electrical Engineering Courses.

Admission of special students to the Mining Classes.—Provided there is room, persons who have completed at least two years' practical work upon a mine may be admitted in November direct to the junior year of the Mining Course as special students, irrespective of age, provided that their general education is such as to enable them to follow the course with profit. They must apply for admission before 1st July, producing statements from the managers under whom they have served, showing the nature of their employment and period.

Two places in the Mechanical and Electrical Engineering and two places in the Mining Courses are reserved for students from Bihar and Orissa.

The total number of admissions to the above courses in Civil and Mechanical and Electrical Engineering and Mining is limited to 60. Preference is given to admissions to the junior years of the Upper Subordinate, the Mechanical and Electrical Engineering and Mining Courses and to the second year of the Sub-Overseer Courses. The number admitted to the Civil and Mechanical and Electrical and Mining Branches is regulated by the Principal, so that the total number in any combined class does not exceed 60, nor in any special branch shall it exceed 30.

In determining the age of candidates for admission, Indian students must produce a certificate signed by the Head Master of the School from which he matriculated certifying as to the age statement made by his guardian on the occasion of his first going to school; European students must produce their baptismal certificates.

FOOT-NOTE.—Drawing Syllabus.—*Geometrical.*—Division of lines and angles, construction of triangles and quadrilaterals, construction of regular polygons, inscribing triangles, polygons and circles in geometrical figures, construction of circles touching lines and circles, equality of areas, division of areas, construction of angles, use of protractor.

Free-hand.—Free-hand drawing of simple ornaments, etc., to larger or reduced sizes.

Candidates may be excused the Drawing Test in 1916, but are recommended to take it, if possible.

* In 1917 admission to the Overseer Course will be made in April immediately the results are announced. Applications must be in the Principal's office on or before 30th March.

APPENDIX IV—*contd.*MISCELLANEOUS—*contd.*Statement No. 4—*concl'd.*

MEDICAL EXAMINATION.

Every applicant must before admission present himself before the Medical Officer resident at the College for examination as to his eyesight, physical strength and fitness for manual labour. In the case of those resident at a distance, a Civil Surgeon's certificate will be accepted. Candidates not protected by vaccination must be vaccinated before admission.

Any student unable to join the College on the date mentioned in his admission letter must send by that date Rs. 9 of the first instalment of fees in order to secure his seat; failing this, another student will be admitted in his place. He must also bring with him, when he joins, a medical certificate from a Civil or Assistant Surgeon testifying his inability to join on the proper date, failing which he will be liable to a fine of Rs. 10.

VACATION.

The College will be closed for the long vacation from about the middle of August to the first Monday in November. No students may remain at the College during this period, except such as may be detained on duty by the Principal.

RESIDENTIAL ARRANGEMENTS.

All students must be resident.

There are separate furnished barrack accommodation and messing arrangements for 36 Europeans and Anglo-Indians, 171 Hindus and 16 Muhammadans.

On account of the greater cost of living at the College owing to the small number of Muhammadan students, Government maintains a cook and one other servant, and pays a stipend to each Muhammadan student varying from Rs. 6 to Re. 1 a month according as there may be one or sixteen resident Muhammadans.

COLLEGE DUES.

| <i>Initials—</i> | Rs. | |
|---------------------------------|-----|--|
| Entrance fee, mess ... | 2 | } Non-returnable. |
| Entrance fee, athletic club ... | 1 | |
| Caution-money deposit ... | 25 | Balance after paying College dues returnable if applied for within three years from date of leaving College. |

Monthly—

| | | |
|--------------------------------|---|-------------------------------------|
| Tuition ... | 3 | payable for each month of the year. |
| Electric light ... | 1 | payable for ten months of the year. |
| Board (session), 9½ months ... | | Europeans, Rs. 25; Hindus, Rs. 12. |
| „ (vacation), 2½ „ ... | | Europeans, Rs. 5; Hindus, Rs. 2-8. |
| Athletic Club ... | 1 | in March, June and November. |

Free studentships.—A total number of five are available for European students.

Reduced feeships.—A total number of 25 reduced feeships are available for Europeans. These reduce the fees to Rs. 5 for messing payable for 12 months in addition to the electric light and athletic club fees.

A total number of 40 reduced feeships are available for Indians. These reduce the fees to Rs. 2 for messing, payable for 12 months in addition to the electric light and athletic club fees.

NOTE.—Free and reduced feeships apply only to students whose parents or guardians reside within the limits of the jurisdiction of the Governor of Bengal, but the sons of employes of the East Indian Railway, Bengal-Nagpur Railway or Eastern Bengal Railway, of soldiers serving in India, of Survey, Telegraph and other Government officers who are liable to employment in Bengal, or pensioners who, when on active service, were liable to be so employed, are eligible for election.

Forms of application for the reduced feeships are available in the Principal's office.

These free and reduced feeships are awarded by the Board of Visitors after the commencement of the session from among students who have joined.

A small sum of money from the Mohsin Fund is placed at the disposal of the Principal for the payment of half the tuition fees of a limited number of poor Muhammadan students residents of Bengal.

APPENDIX IV—*contd.*MISCELLANEOUS—*contd.*

Statement No. 5.

MINING INSTRUCTION IN BENGAL AND BIHAR AND ORISSA.

[The Mining Educational Advisory Board desire that Colliery Managers will kindly publish this information in their collieries. An appeal is also made to them to support the lectures by seeing that members of their colliery staff, who are suitable, take advantage of the lectures and attend them regularly.]

RANIGANJ AND JHARIA COALFIELDS.

Lectures will be delivered throughout the session at the following centres on the syllabus laid down for the first-year course:—

| <i>Place and days.</i> | <i>Lecturer and Local Secretary.</i> |
|--|---|
| (1) Lecture-room near the Jharia Club, at 5-30 p.m., on Mondays. | } Mr. H. C. Read, Mining Instructor, Muslia, Asansol. |
| (2) Lecture-room near Sijua station, at 5 p.m., on Tuesdays. | |
| (3) Lecture-room near Dishergarh Club, at 5-30 p.m., on Wednesdays. | |
| (4) Railway Institute, Raniganj, at 5 p.m., on Thursdays. | |
| (5) Lecture-room at Messrs. Apar Co.'s Charanpur Colliery, at 5-30 p.m., on Fridays. | |

The course of instruction, consisting of not less than 30 lectures, will commence the first week in September and end in the following April in which month an examination will be held. Candidates who pass the examination will receive a certificate recording their success. No candidate will, however, be permitted to sit for the examination unless he has attended 50 per cent. of the lectures and received 40 per cent. of the marks allotted for home work.

All Europeans and English-speaking Indians are cordially invited to attend.

Rupees 100 monthly is offered in Scholarships awarded by the Mining Education Advisory Board on the results of the Sessional Examination, these will be tenable for two years at the Sibpur College and are granted to enable the holders to attend the full course for the Diploma in the Principles of Mining. One Scholarship of Rs. 50 is reserved for Europeans and two of Rs. 25 are awarded for Indians.

The following Sub-Committees have been appointed for each centre:—

RANIGANJ DISTRICT.

| <i>Dishergarh Centre.</i> | <i>Charanpur Centre.</i> | <i>Raniganj Centre.</i> |
|-----------------------------------|-----------------------------------|---|
| Mr. G. C. Leach, <i>Chairman.</i> | Mr. G. C. Leach, <i>Chairman.</i> | Mr. G. C. Leach, <i>Chairman.</i> |
| „ Glen George (Dishergarh). | „ T. Samson (Charanpur). | „ P. S. Keelan (Charanpur). |
| „ Geo. Miller (Sitarampur). | „ R. Mitchell (Nandi). | „ J. Mackintosh (Raniganj). |
| „ F. Owen (Dishergarh). | „ E. M. Patterson (Charanpur). | „ W. J. Rees (Raniganj). |
| Babu M. N. Ray (Begunia). | „ W. S. Elphinstone (Asansol). | Babu Promotho Nath Hazra (Toposi). |
| „ P. C. Tarafdar (Mugma). | Babu Atul Shashi Mitra (Asansol). | „ Kali Kumar Misra (Searsole Raj Estate). |
| „ Hari Pada Mukharji (Mugma). | | „ S. Chaudhuri (Jamehari, Raniganj). |

APPENDIX IV—*contd.*MISCELLANEOUS—*contd.*Statement No. 5—*contd.*

JHARIA DISTRICT.

| <i>Jharia Centre.</i> | <i>Sijua Centre.</i> |
|---|-------------------------------------|
| Mr. R. R. Simpson, <i>Chairman.</i> | Mr. R. R. Simpson, <i>Chairman.</i> |
| „ R. G. M. Bathgate (Jamadoba). | „ A. A. Agabeg (Sijua). |
| „ J. S. Kean (Jamadoba). | „ R. Heron (Sinidih, Katrasgarh). |
| „ E. D. James (Lodna). | „ B. Starksfield (Bansjora). |
| „ R. Barrowman (Standard Coal Company, Jharia). | „ H. M. Bull (Bansjora). |
| Babu Gobhurdhan Das Manishankar (Jharia). | Babu Trikundas Doyal (Bansjora). |
| „ Narendra Nath Sarkar (South Kujama, Jharia). | „ Basanta Kumar Ray (Kurkend). |

SYLLABUS OF THE COURSE OF INSTRUCTION.

The course will treat principally of the more practical operations in actual mining, with special reference to India, and the principles underlying such operations will be thoroughly discussed. Special attention will be paid to the various methods of working thick seams. Sketches illustrating the lectures will be distributed free of charge.

At the close of each lecture questions will be set for home work.

FIRST-YEAR COURSE.

1. *Geology.*—General structure of the crust of the earth; descriptions of fault, dyke, outcrop, dip, strike, unconformity, etc.; composition and properties of coal; special reference to the coal measures in India; importance of recording results of observations.
2. *Exploration.*—Advantages of borings; driving through faults, wash-outs, dykes, methods of maintaining the direction and gradient of such drivages.
3. *Boring and winning.*—Different systems of borings; choice of methods; cost of boring; winning coal by inclines, adits, shafts, and cross-cuts.
4. *Sinking.*—Site of colliery; position of shafts, excavation and shape; blasting with use of safety fuse and electric battery; explosives and detonators, their safe storing and handling; sinking and how to deal with difficulties: apparatus and tools used; lining shafts and scaffolding; pit banking arrangements.
5. *Opening out and methods of working surveying.*—Shafts; pillars; arching or supporting the pit bottom; quarrying; pillar and stall; double road stall; long wall; panel systems.
6. *Timbering and supporting.*—Fixing of props and double timber, chocks or cogs; special methods of timbering to withstand pressure from the roof, sides and floor; securing dangerous holes in the roof due to heavy falls; use of iron or steel girders; stowing and packing; arching.
7. *Gases met with in coal mines.*—Their experimental preparation by chemicals, and illustration of their physical and physiological properties; methods of detecting explosion and gob fires.
8. *Ventilation.*—Natural and artificial methods; coursing the air; use of stoppings, brattices, doors, air bridges, regulators; measuring the quantity of air, use of thermometer, barometer; water-gauge, anemometer; the friction of air in mines and the elementary theory of splitting.
9. *Safety lamps.*—Theory of safety lamps, Sir Humphrey Davy's experiment; the Davy lamp, the Clanny and Thomas and Williams lamps, the Marsuat and Mueseler lamps, fire-damp detectors.

SECOND-YEAR COURSE.

1. *Mechanical Engineering of collieries.*—Winding engines, discussion of the different types, calculation of the dimensions of cylinders, length of stroke, diameter of drum, etc.; strength of winding ropes and chains, detaching hooks, capping and winding ropes, care and examination of ropes.
2. *Pumping.*—Importance of a good system; measurement of quantities of water; lifting and forcing pumps; pumps for sinking; temporary and permanent pumps; calculation of dimensions of pumps to perform a given duty, strength of pipes, methods of supporting; different types of joints.

APPENDIX IV—*contd.*MISCELLANEOUS—*contd.*Statement No. 5—*concl'd.*SECOND-YEAR COURSE—*concl'd.*

3. *Hauling*.—Tramways, tubs and waggons ; conveyance by self-acting inclines ; single-rope haulage ; main and tail ; endless rope ; endless chain ; calculations concerning inclines, sizes of haulage engines, ropes, etc. ; signalling ; capping of haulage ropes.

4. *Methods of working and ventilation*.—Revision of first-year course work, followed by a fuller treatment of these subjects.

5. *Surface arrangements*.—Boilers ; Cornish, Lancashire, and water-tube types ; boiler fittings, injectors, and steam-pipes, etc. ; boiler explosions, incrustation, corrosion and priming ; calculations of boilers. Heap steads ; arrangement of roads around pit bank ; simple screening and sizing.

6. *Transmission of power*.—By steam, compressed air, and electricity, discussing the relative merits of each system.

Text-books recommended.—Peel's or Kerr's Elementary Mining ; O'Donoghue's Mining Arithmetic.

B. HEATON,

(Principal, Civil Engineering College),

Secretary to the Mining Educational Advisory Board.

SIBPUR COLLEGE,

Calcutta, the 12th July 1916.

Statement No. 6.

No. 5072-113.

GOVERNMENT OF INDIA.

DEPARTMENT OF COMMERCE AND INDUSTRY.

NOTIFICATION.

GEOLOGY AND MINERALS.

Dated Simla, the 1st July, 1916.

In exercise of the powers conferred by Section 20 of the Indian Mines Act, 1901 (VIII of 1901), the Governor-General in Council is pleased to make the following amendments in the rules issued with Notification No. 11793-103 (Geology and Minerals), dated the 30th December 1908, namely :—

(1) For Rule I substitute the following, namely :—

Forms I, II, III, IV, V and VI, respectively, for coal, mica and mines other than coal or mica, in the Schedule hereto annexed shall be (1) filled up in duplicate by the agent or if there is no agent, by the owner or manager of a coal, mica or other mine, as the case may be, and one copy of each shall be forwarded to the Chief Inspector of Mines and the other to the District Magistrate not later than the 21st January (2) in each year.

(2) In rule 8 for the words "Form V" substitute the words "Form VII."

(3) For the Schedule appended to the Rules the following shall be substituted, namely :—

(1) Under Section 22 (2) (b) of the Indian Mines Act, failure to forward correct returns to the Chief Inspector of Mines not later than the 21st January in each year will render the agent, owner or manager liable, on conviction, to a penalty which may extend to Rs. 500.

(2) It will greatly facilitate the preparation of the statistics if the returns are despatched as soon as possible after the close of the year.

APPENDIX IV—contd.
MISCELLANEOUS—contd.

Statement No. 6—contd.
THE SCHEDULE.
COAL MINES.

FORM I.

Annual Return for the year ending on the 31st December 19 .

1. Name of Mine _____

2. Postal address of Mine _____

3. Date of opening _____

4. Date of closing (if closed) _____

5. Situation of Mine { District _____
Province _____

6. { Name of Owner _____
Postal address of Owner _____

7. { Name of Managing Agents (if any) _____
Postal address of Managing Agents (if any) _____

8. { Name of Agent (if any) as defined in section 3 (a) of the Indian Mines Act _____
Postal address of Agent _____

9. { Name of Manager _____
Postal address of Manager _____

10. Means by which coal is raised from the mine, i.e., hand labour, mechanical or electrical power _____

APPENDIX IV—*contd.*

MISCELLANEOUS—*contd.*

Statement No. 6—*contd.*

FORM IV.

Output for year ending on the 31st December 19 .

| Kind of coal. | Opening stock on 1st January 19 . | Raisings (including colliery consumption and coal used for coke making). | Value of raisings. ("Value" means and should be calculated upon actual or estimated selling price into wagons at the mine.) | Despatches. | Colliery consumption (exclusive of coal used for coke making). | Coal delivered to coking. | Closing stocks on 31st December 19 . | COKE MADE. | |
|------------------------------------|-----------------------------------|--|---|-------------|--|---------------------------|--------------------------------------|---------------------|-----------------------------------|
| | | | | | | | | Hard coke in ovens. | Soft coke in open heaps or ovens. |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| | Tons. | Tons. | Rs. | Tons. | Tons. | Tons. | Tons. | Tons. | Tons. |
| STEAM | | | | | | | | | |
| SLACK (including rubble and dust). | | | | | | | | | |
| TOTAL | | | | | | | | | |

APPENDIX IV—*contd.*MISCELLANEOUS—*contd.*Statement No. 6—*contd.*

FORM V.

Accidents and Prosecutions.

| NUMBER OF SEPARATE ACCIDENTS REPORTED DURING THE YEAR. | | | NUMBER OF PERSONS. | | Number of pro- secutions under the Act, with the sec- tions under which the prosecutions were instituted and the rules violated. | Number of persons convicted under the Act, with the sections under which the convictions were obtained. |
|---|----------|--------|--------------------|-----------------------|---|--|
| Fatal. | Serious. | Total. | Killed. | Seriously injured. | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| TOTAL | ... | | | | | |

FORM VI.

Epidemic Diseases.

| Name of disea-e. | Date of appearance. | Date of disappearance. | Number of cases. | Number of deaths. |
|------------------|---------------------|---------------------------|------------------|-------------------|
| Cholera | | | | |
| Plague | | | | |
| Small-pox | | | | |

Signature of Agent, or, if there is no Agent, of Owner or Manager _____

(If the form is signed by Managing Agents the words "for owners"

should be added.)

Date of Signature _____

APPENDIX IV—*contd.*MISCELLANEOUS—*contd.*Statement No. 6—*contd.*

MICA MINES.

FORM I.

Annual Return for the year ending on the 31st December 19 .

1. Name of Mine _____
2. Date of opening _____
3. Date of closing (if closed) _____
4. Means by which mica is raised from the mine, *i.e.*, hand labour, mechanical or electrical power _____
5. Situation of Mine {
 - District _____
 - Province _____
6. {
 - Name of Owner _____
 - Postal address of Owner _____
7. {
 - Name of Managing Agents (if any) _____
 - Postal address of Managing Agents (if any) _____
8. {
 - Agent (if any) as defined in section 3 (a) of the Indian Mines Act _____
 - Postal address of Agent _____
9. {
 - Name of Manager _____
 - Postal address of Manager _____
10. {
 - Name of person in charge at mine _____
 - Postal address of person in charge at mine _____

APPENDIX IV—*contd.*MISCELLANEOUS—*contd.*Statement No. 6—*contd.*

FORM II.

Persons employed during the year ending on the 31st December 19 .

| DAILY AVERAGE NUMBER OF PERSONS EMPLOYED AS CALCULATED BY DIVIDING THE AGGREGATE NUMBER OF ATTENDANCES BY THE NUMBER OF DAYS WORKED. | | | | | | | | | | |
|--|------------------------|-----------------------------|-------------------------------|---------------------------------|--------|--|-------------------------------|---------------------------------|--------|--|
| | | IN THE MINE. | | | | ON SURFACE AND NOT IN THE MINE. INCLUDING ALL OFFICIALS AND PERSONS EMPLOYED ON SIDINGS, LOADING WHARVES, PRIVATE RAILWAYS AND SURFACE TRAMWAYS AND ALSO IN CARTING. | | | | |
| Aggregate number of daily attendances during the year of persons permanently and temporarily employed. | Number of days worked. | Males over 12 years of age. | Females over 12 years of age. | Children under 12 years of age. | Total. | Males over 12 years of age. | Females over 12 years of age. | Children under 12 years of age. | Total. | Gross total obtained by adding totals in columns 6 and 10. This should equal the number obtained by dividing the number in column 1 by the number in column 2. |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| | | | | | | | | | | |
| Total | | | | | | | | | | |

FORM III.

Particulars of Explosives.

| EXPLOSIVES. | | |
|--------------------|-----------------------|----------------------------|
| Name of explosive. | Quantity used in lbs. | Number of detonators used. |
| | | |
| TOTAL | | |

APPENDIX IV—contd.
MISCELLANEOUS—contd.

Statement No. 6—contd.

FORM IV.

Output for year ending on the 31st December 19 .

| Total amount of mica raised. The figures should be stated in cwts. and lbs. | Total value at the mine of mica raised. ("Value" means and should be calculated upon actual or estimated selling price at the mine. Any charges incurred in transporting the mica outside the mine should not be included. Figures should relate to the quantity and value of mica consigned.) |
|---|--|
| 1 | 2 |
| | |
| * TOTAL ... | |

APPENDIX IV—*contd.*
 MISCELLANEOUS—*contd.*

Statement No. 6—*contd.*

FORM V.

Accidents and Prosecutions.

| NUMBER OF SEPARATE ACCIDENTS REPORTED DURING THE YEAR. | | | NUMBER OF PERSONS. | | Number of prosecutions under the Act, with the sections under which the prosecutions were instituted and the rules violated. | Number of persons convicted under the Act, with the sections under which the convictions were obtained. |
|--|----------|--------|--------------------|--------------------|--|---|
| Fatal. | Serious. | Total. | Killed. | Seriously injured. | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| TOTAL | | | | | | |

FORM VI.

Epidemic Diseases.

| Name of disease. | Date of appearance. | Date of disappearance. | Number of cases. | Number of deaths. |
|---------------------|---------------------|------------------------|------------------|-------------------|
| Cholera | | | | |
| Plague | | | | |
| Small-pox | | | | |

Signature of Agent, or, if there is no Agent, of Owner or Manager _____

(If the form is signed by Managing Agents the word "for owners" should be added.)

Date of Signature _____

APPENDIX IV—*contd.*MISCELLANEOUS - *contd.*Statement No. 6—*contd.*

MINES OTHER THAN COAL OR MICA.

FORM I.

Annual return for the year ending on the 31st December 19 .

1. Name of Mine _____
2. Date of opening _____
3. Date of closing (if closed) _____
4. Means by which mineral is raised from the mine, i.e., hand labour, mechanical or electrical power _____
5. Situation of Mine { District _____
Province _____
6. { Name of Owner _____
Postal address of Owner _____
7. { Name of Managing Agents (if any) _____
Postal address of Managing Agents (if any) _____
8. { Agent (if any) as defined in section 3 (a) of the Indian Mines Act _____
Postal address of Agent _____
9. { Name of Manager _____
Postal address of Manager _____
10. { Name of person in charge at mine _____
Postal address of person in charge at mine _____

APPENDIX IV—*contd.*MISCELLANEOUS—*contd.*Statement No. 6—*contd.*

FORM II.

Persons employed during the year ending on the 31st December 19 .

| DAILY AVERAGE NUMBER OF PERSONS EMPLOYED AS CALCULATED BY DIVIDING THE AGGREGATE NUMBER OF ATTENDANCES BY THE NUMBER OF DAYS WORKED. | | | | | | | | | | |
|--|------------------------|-----------------------------|-------------------------------|---------------------------------|--------|--|-------------------------------|---------------------------------|--------|--|
| IN THE MINE. | | | | | | ON SURFACE AND NOT IN THE MINE. INCLUDING ALL OFFICIALS AND PERSONS EMPLOYED ON SIDINGS, LOADING WHARVES, PRIVATE RAILWAYS AND SURFACE TEAMWAYS AND ALSO IN CARTING. | | | | |
| Aggregate number of daily attendances during the year of persons permanently and temporarily employed. | Number of days worked. | Males over 12 years of age. | Females over 12 years of age. | Children under 12 years of age. | Total. | Males over 12 years of age. | Females over 12 years of age. | Children under 12 years of age. | Total. | Gross total obtained by adding totals in columns 8 and 10. This should equal the number obtained by dividing the number in column 1 by the number in column 2. |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| | | | | | | | | | | |
| TOTAL | ... | | | | | | | | | |

FORM III.

Particulars of Explosives.

| EXPLOSIVES. | | |
|--------------------|-----------------------|----------------------------|
| Name of explosive. | Quantity used in lbs. | Number of detonators used. |
| | | |
| TOTAL | .. | |

APPENDIX IV—contd.

MISCELLANEOUS—contd.

Statement No. 6—contd.

FORM IV.

Output for year ending on the 31st December 19 .

| Name of mineral raised, and metal (if any) extracted. | Total amount of mineral raised. The figures should be stated :— (a) in the case of gem-stones in carats; (b) in the case of alum, amber, asbestos, chromite, corundum (not being gem-corundum), graphite, jadestone, scapolite, tin-ore, tungsten-ore in cwts., or where the circumstances require greater particularisation in order to give an accurate estimate of small outputs, in cwts. and lbs. Output of radio-active minerals and rare minerals such as molybdenite, monazite, pitchblende, samarskite, tantalite, triplite, should be returned in cwts. or, where necessary, in cwts. and lbs.; (c) in the case of clay, limestone, magnesite, marble, phosphatic rock, salt, slate and other stone, and all metalliferous ores except those referred to in (b), in tons. | Total value at the mine of mineral raised. ("Value" means and should be calculated upon actual or estimated selling price at the mine. Any charges incurred in transporting the mineral outside the mine property should not be included.) | Quantity of metal or metals extracted the mine. Each metal should be shown separately :— (a) in the case of gold, silver and other precious metals in Troy ounces; (b) in the case of tin, in cwts. and fractions of cwts; (c) in the case of other metals in tons and fractions of tons. | Value of metal or metal extracted at the mines. The value of each metal should be shown separately. |
|---|--|--|--|---|
| 1 | 2 | 3 | 4 | 5 |
| | | | | |
| TOTAL ... | | | | |

APPENDIX IV—*contd.*

MISCELLANEOUS—*contd.*

Statement No. 6—*contd.*

FORM V.

Accidents and Prosecutions.

| NUMBER OF SEPARATE ACCIDENTS REPORTED DURING THE YEAR. | | | NUMBER OF PERSONS. | | Number of prosecutions under the Act, with the sections under which the prosecutions were instituted and the rules violated. | Number of persons convicted under the Act, with the sections under which the convictions were obtained. |
|--|----------|--------|--------------------|--------------------|--|---|
| Fatal. | Serious. | Total. | Killed. | Seriously injured. | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| TOTAL ... | | | | | | |

FORM VI.

Epidemic Diseases.

| Name of disease. | Date of appearance. | Date of disappearance. | Number of cases. | Number of deaths. |
|------------------|---------------------|------------------------|------------------|-------------------|
| Cholera | | | | |
| Plague | | | | |
| Small-pox | | | | |

Signature of Agent, or, if there is no Agent, of Owner or Manager _____

(If the form is signed by Managing Agents the words "for owners" should be added.)

Date of Signature _____

APPENDIX IV—*contd.*MISCELLANEOUS—*contd.*Statement No. 6—*concl'd.*

FORM VII.

Notice of Accident.

FROM—

TO—The Inspector of Mines, through the ^{District}_{Sub-divisional} Magistrate of

Dated . . . 19 . . .

SIR,

I have the honour to furnish the following particulars of a ^{fatal}_{serious} accident which has occurred at the Mine :—
an accidental explosion

| 1. Situation of the mine. (Village, Station, District, Province.) | | | |
|--|----------|------|-------------|
| 2. Mineral worked | | | |
| 3. Name and postal address of owner | | | |
| 4. Name and sex of persons | | Age. | Occupation. |
| Killed. | Injured. | | |
| | | | |
| 5. Date and hour of accident | | | |
| 6. Place of accident | | | |
| 7. Cause and description | | | |
| 8. Classification of accident (1) | | | |
| 9. Nature of injury, and if fatal cause of death. | | | |

I have the honour to be,

SIR,

Your most obedient servant,

Owner.

Agent.

Manager.

(1) Under one or other of the following heads, namely :—

- (1) Explosions of fire damp ; (2) falls of roof ; (3) falls of sides ; (4) in shafts (overwinding) ; (5) in shafts (ropes and chains breaking) ; (6) in shafts (whilst ascending or descending by machinery) ; (7) in shafts (falling into the shafts from the surface) ; (8) in shafts (falling from part of the way down) ; (9) in shafts (things falling from the surface) ; (10) in shafts (things falling from part of the way down) ; (11) in shafts (miscellaneous) ; (12) suffocation by gases ; (13) by explosives ; (14) irruptions of water or falling into water ; (15) haulage ; (16) by underground machinery ; (17) sundries underground ; (18) by surface machinery ; (19) surface boilers or pipes bursting ; (20) on surface railways or tramways belonging to the mine ; (21) miscellaneous on surface.

C. E. LOW,

Secretary to the Government of India.

APPENDIX IV—*concl'd.*MISCELLANEOUS—*concl'd.*

Statement No. 7.

LAND ACQUISITION (MINES) ACT, 1885.

Particulars required to be furnished by colliery owners to Local Governments when giving notice under Section IV of the Land Acquisition (Mines) Act, 1885, of their intention to work coal under land acquired for a railway :—

- (a) The name, residence and profession of the person giving the notice.
- (b) The name of the mine, together with that of the village and district in which the mine is situate.
- (c) The name of the railway line or of the siding and the main line to which the siding is attached, under which the mine is situate.
- (d) The names of the railway stations and the mileage between which the said siding or the said portion of the railway land, under which the mine is situate falls.
- (e) The number and date of the declaration under which the land was acquired.
- (f) A tracing showing the boundaries of, and the area over which, the acquired land extends.