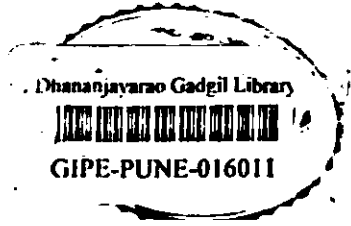


Department of Mines, India.



# REPORT

OF THE

# CHIEF INSPECTOR OF MINES IN INDIA

Under the Indian Mines Act (VIII of 1901)

FOR THE



YEAR ENDING 31st DECEMBER 1911

BY

G. F. ADAMS,

*Chief Inspector of Mines in India*

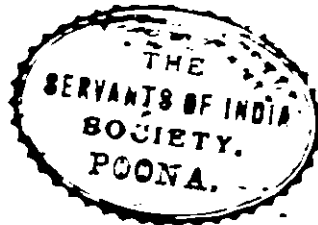


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## APPENDIX I.

### 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 1911.

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.		
							<b>A.—COAL.</b>										
							Tons.										
Bengal	Hazaribagh	Bokaro-Ramgarh	3	...	3	...	...	468	11	11	...	22	2	1	...	3	25
		Jharia	2	...	2	...	...	55	...	...	...	...	8	3	...	11	11
		Giridih	6	5	1	5	9	704,443	3,123	1,175	6	4,304	1,607	915	78	2,515	6,809
	Manbhum	Jharia	196	115	81	161	314	6,373,673	19,074	14,374	299	33,747	12,623	6,049	1,019	10,691	53,438
		Raniganj	55	10	45	48	93	451,273	2,350	936	2	3,288	926	493	22	1,441	4,729
	Bankura, Raniganj	2	...	2	1	1	7,057	33	20	...	53	6	7	...	13	66	
	Sonthal Parganas.	Raniganj	2	...	2	...	...	2,109	12	5	...	17	5	4	...	9	26
		Rajmahal	2	...	2	...	...	1,978	8	3	...	11	2	4	...	6	17
	Palamanu, Daltonganj	1	1	...	...	...	70,862	174	179	16	369	216	37	40	293	602	
	Birbhum, Raniganj	1	...	1	...	...	1,258	7	5	...	12	7	2	...	9	21	
	Burdwan, Raniganj	151	132	19	134	259	3,850,259	15,208	7,256	175	22,639	7,391	3,588	226	11,205	33,844	
	Sambalpur, Hingir-Rampur	1	1	...	1	1	5,669	116	...	...	116	119	11	...	130	245	
		<b>TOTAL</b>	422	264	158	350	677	11,468,904	40,115	23,984	498	64,577	22,912	11,114	1,380	35,406	99,983

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 1911.

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.	
Central Provinces	Chhindwara, Pench Valley	2	2	...	2	2	63,030	195	144	7	346	86	27	11	124	470
	Narsinghpur, Mohpani	1	1	...	...	...	51,983	468	204	...	672	357	58	...	415	1,087
	Chanda, Ballarpur	1	1	...	1	2	96,603	585	...	...	585	150	...	...	150	735
	TOTAL	4	4	...	3	4	211,616	1,248	348	7	1,603	593	85	11	689	2,292
Panjab	Jhelum	8	1	7	...	...	26,982	873	...	...	873	454	...	11	465	1,338
	Shahpur	1	...	1	...	...	1,071	20	...	...	20	10	4	1	15	35
	Mianwali	1	...	1	...	...	2,522	43	...	...	43	88	1	...	89	132
	TOTAL	10	1	9	...	...	30,575	936	...	...	936	552	5	12	569	1,505
Eastern Bengal and Assam	Lakhimpur	8	6	2	7	14	291,893	944	267	...	1,211	464	250	40	754	1,965

Baluchistan	Sibi	4	1	3	1	8	43,410	527	...	...	527	279	...	31	310	837	
	Loralai	1	...	1	1	1	188	8	...	...	8	3	...	...	3	11	
	<b>TOTAL</b>	<b>5</b>	<b>1</b>	<b>4</b>	<b>2</b>	<b>9</b>	<b>42,598</b>	<b>535</b>	<b>...</b>	<b>...</b>	<b>535</b>	<b>282</b>	<b>...</b>	<b>31</b>	<b>313</b>	<b>848</b>	
North-West Frontier Province	Hazara	1	...	1	...	...	140	5	...	...	5	...	...	...	...	5	
	<b>GRAND TOTAL (COAL) FOR 1911.</b>	<b>450</b>	<b>276</b>	<b>174</b>	<b>362</b>	<b>704</b>	<b>12,048,726</b>	<b>43,783</b>	<b>24,579</b>	<b>505</b>	<b>68,867</b>	<b>24,803</b>	<b>11,454</b>	<b>1,474</b>	<b>37,731</b>	<b>106,598</b>	
	<b>" " OF PRECEDING YEAR.</b>	<b>443</b>	<b>263</b>	<b>160</b>	<b>290</b>	<b>575</b>	<b>11,387,716</b>	<b>43,182</b>	<b>23,654</b>	<b>589</b>	<b>67,425</b>	<b>25,149</b>	<b>11,212</b>	<b>1,499</b>	<b>37,860</b>	<b>105,265</b>	
	<b>DIFFERENCE</b>	<b>+7</b>	<b>-7</b>	<b>+14</b>	<b>+72</b>	<b>+129</b>	<b>+661,010</b>	<b>+601</b>	<b>+925</b>	<b>-84</b>	<b>+1,442</b>	<b>-346</b>	<b>+242</b>	<b>-25</b>	<b>-129</b>	<b>+1,313</b>	
							<b>B.—MICA.</b>										
							Cwts.										
Bengal	Monghyr	7	...	7	...	...	848	82	74	32	188	71	28	20	119	307	
	Hazaribagh	404	13	391	75	77	18,601	3,964	1,507	226	5,637	1,643	1,595	1,174	4,412	10,109	
	Gaya	18	...	18	...	...	5,099	574	216	52	842	94	228	215	537	1,379	
	<b>TOTAL</b>	<b>429</b>	<b>13</b>	<b>416</b>	<b>75</b>	<b>77</b>	<b>24,033</b>	<b>4,620</b>	<b>1,797</b>	<b>310</b>	<b>6,727</b>	<b>1,803</b>	<b>1,851</b>	<b>1,409</b>	<b>5,068</b>	<b>11,795</b>	
Madras	Nellore	51	2	49	34	34	7,046	1,295	936	84	2,815	271	419	493	1,183	3,498	
	Salem	1	...	1	...	...	77	20	...	...	20	3	...	10	18	33	
	<b>TOTAL</b>	<b>52</b>	<b>2</b>	<b>50</b>	<b>34</b>	<b>34</b>	<b>7,123</b>	<b>1,315</b>	<b>936</b>	<b>84</b>	<b>2,835</b>	<b>274</b>	<b>419</b>	<b>503</b>	<b>1,196</b>	<b>3,531</b>	

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 1911.

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.	
Rajputana	Ajmer-Merwara	7	...	7	6	6	Cwts. 530	146	...	...	146	23	37	42	102	248
	<b>GRAND TOTAL (MICA) FOR 1911.</b>	<b>488</b>	<b>15</b>	<b>473</b>	<b>115</b>	<b>117</b>	<b>31,686</b>	<b>6,081</b>	<b>2,733</b>	<b>394</b>	<b>9,208</b>	<b>2,105</b>	<b>2,307</b>	<b>1,954</b>	<b>6,366</b>	<b>15,574</b>
	" " OF PRECEDING YEAR.	227	7	220	134	138	21,375	5,207	2,514	247	7,968	1,828	2,066	1,639	5,533	13,501
	<b>DIFFERENCE</b>	<b>+261</b>	<b>+8</b>	<b>+253</b>	<b>-19</b>	<b>-21</b>	<b>+10,311</b>	<b>+874</b>	<b>+219</b>	<b>+147</b>	<b>+1,240</b>	<b>+277</b>	<b>+241</b>	<b>+315</b>	<b>+833</b>	<b>+2,073</b>
Central Provinces	<b>C.—MANGANESE.</b>															
	Nagpur	15	2	13	13	19	Tons. 148,479	1,627	1,252	11	2,890	419	258	26	703	3,593
	Bhandara	9	...	9	2	4	77,990	375	266	...	641	456	372	10	838	1,479
	Balaghat	6	...	6	3	9	110,794	1,201	833	59	2,093	270	95	5	370	2,463
	Chhindwara	2	1	1	1	1	1,540	22	28	...	50	33	50	..	83	133
<b>TOTAL</b>	<b>32</b>	<b>3</b>	<b>29</b>	<b>19</b>	<b>33</b>	<b>338,803</b>	<b>3,225</b>	<b>2,370</b>	<b>70</b>	<b>5,674</b>	<b>1,178</b>	<b>775</b>	<b>41</b>	<b>1,994</b>	<b>7,668</b>	
Madras	Vizagapatam	10	1	9	2	2	57,293	1,452	643	...	2,095	346	198	65	609	2,704



Bombay . . . . .	Panch Mahals . . . . .	2	1	1	2	3	45,330	670	365	68	1,093	261	130	28	419	1,513
	<b>GRAND TOTAL (MANGANESE) FOR 1911.</b>	<b>44</b>	<b>5</b>	<b>39</b>	<b>23</b>	<b>38</b>	<b>441,428</b>	<b>5,347</b>	<b>3,387</b>	<b>128</b>	<b>8,862</b>	<b>1,785</b>	<b>1,103</b>	<b>134</b>	<b>3,022</b>	<b>11,884</b>
	" " OF PRECED- ING YEAR.	41	7	34	4	8	468,869	4,803	2,720	78	7,601	2,311	1,261	174	3,746	11,347
	<b>DIFFERENCE . . .</b>	<b>+3</b>	<b>-2</b>	<b>+5</b>	<b>+19</b>	<b>-30</b>	<b>-27,243</b>	<b>+544</b>	<b>+667</b>	<b>+50</b>	<b>+1,261</b>	<b>-526</b>	<b>-158</b>	<b>-40</b>	<b>-724</b>	<b>+537</b>
					<b>D.—LIMESTONE.</b>											
					Tons.											
Central Provinces . . . . .	Jabalpur, Katni . . . . .	20	1	19	27	30	92,442	830	973	176	1,979	531	792	80	1,403	3,332*
Panjab . . . . .	Hoshiarpur . . . . .	1	...	1	...	...	250	40	...	...	40	50	...	...	50	90
	<b>GRAND TOTAL (LIMESTONE) FOR 1911.</b>	<b>21</b>	<b>1</b>	<b>20</b>	<b>27</b>	<b>30</b>	<b>92,692</b>	<b>870</b>	<b>973</b>	<b>176</b>	<b>2,019</b>	<b>581</b>	<b>792</b>	<b>80</b>	<b>1,453</b>	<b>3,472</b>
	" " OF PRECED- ING YEAR.	19	1	18	...	...	81,258	734	818	33	1,585	340	537	48	925	2,510
	<b>DIFFERENCE . . .</b>	<b>+2</b>	<b>...</b>	<b>+2</b>	<b>+27</b>	<b>+30</b>	<b>+11,434</b>	<b>+136</b>	<b>+155</b>	<b>+143</b>	<b>+434</b>	<b>+241</b>	<b>+255</b>	<b>+32</b>	<b>+528</b>	<b>+962</b>
					<b>E.—SALT.</b>											
					Tons.											
Panjab	Shahpur . . . . .	1	...	1	...	...	5,608	24	25	5	54	...	...	...	...	54
	Jhelum . . . . .	2	...	2	...	...	108,156	371	324	49	744	83	...	...	83	777
	Mianwali . . . . .	1	...	1	...	...	10,839	59	...	...	59	...	...	...	...	59
	<b>GRAND TOTAL (SALT) FOR 1911.</b>	<b>4</b>	<b>...</b>	<b>4</b>	<b>...</b>	<b>...</b>	<b>124,603</b>	<b>454</b>	<b>349</b>	<b>54</b>	<b>857</b>	<b>83</b>	<b>...</b>	<b>...</b>	<b>83</b>	<b>890</b>
	" " OF PRE- CEDING YEAR.	4	...	4	...	...	119,867	479	389	59	927	31	...	...	31	958
	<b>DIFFERENCE . . .</b>	<b>...</b>	<b>...</b>	<b>...</b>	<b>...</b>	<b>...</b>	<b>+4,736</b>	<b>-25</b>	<b>-40</b>	<b>-5</b>	<b>-70</b>	<b>+2</b>	<b>...</b>	<b>...</b>	<b>+2</b>	<b>-68</b>

\* Includes figures for fuller's earth.

**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 1911.

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	Mogok				F.—GEMS.											
					(a) Rubies.		Carats. 222,968									
	Mogok	6	6	...	...	...	17,269	680	...	...	680	825	...	...	825	1,505
						(b) Sapphires.										
	Mogok				(c) Spinels.		47,976									
	TOTAL	6	6	...	...	...	288,213	680	...	...	680	825	...	...	825	1,505
Madras	Karnool	1	...	1	(d) Diamonds.		3	28	7	2	37	...	...	...	...	37
	GRAND TOTAL (Gems) FOR 1911.	7	6	1	...	...	288,216	708	7	2	717	825	...	...	825	1,542
	" " OF PRECEDING YEAR.	7	5	2	1	1	262,032	637	4	...	641	842	12	7	861	1,502
	DIFFERENCE	...	+1	-1	-1	-1	+26,184	+71	+3	+2	+76	-17	-12	-7	-36	+40

		G.—SLATE.														
							Tons.									
Bengal	Monghyr	6	...	6	1	1	1,014	45	23	...	68	108	17	27	152	220
Panjab	Kangra	5	...	5	7	7	4,112	108	...	...	108	199	63	61	323	431
	Gurgaon	3	...	3	1	1	2,009	46	...	29	75	89	...	6	95	170
TOTAL		8	...	8	8	8	6,131	154	...	29	183	288	63	67	418	601
GRAND TOTAL (SLATE) FOR 1911.		14	...	14	9	9	7,135	199	23	29	251	396	80	94	570	831
" " OF PRECEDING YEAR.		11	...	11	8	12	6,907	192	49	26	267	271	34	45	350	617
DIFFERENCE		+3	...	+3	+1	-3	+228	+7	-26	+3	-16	+125	+46	+49	+220	+204
H.—GOLD.																
Bombay	Dharwar	1	1	...	...	...	Ozs. 2,993	...	...	...	...	230	17	8	264	264
Madras	Anantapur	3	2	1	3	3	5,284	560	...	...	560	461	52	37	550	1,110
GRAND TOTAL (GOLD) FOR 1911.		4	3	1	3	3	8,277	560	...	...	560	700	69	45	814	1,374
" " OF PRECEDING YEAR.		4	4	..	3	3	3,269	636	...	...	636	703	147	37	887	1,523
DIFFERENCE		...	-1	+1	...	...	+5,008	-76	...	...	-76	-3	-78	+8	-73	-149
I.—IRON.																
Bengal	Singhbhum	1	...	1	...	...	Tons. 36,276	341	...	32	373	545	410	...	955	1,328
Central Provinces	Jabalpur	1	...	1	...	...	925	10	25	5	40	...	...	...	...	40
GRAND TOTAL (IRON) FOR 1911.		2	...	2	..	...	36,601	351	25	37	413	545	410	...	955	1,368
" " OF PRECEDING YEAR.		6	...	6	...	...	17,646	110	210	...	320	110	211	...	321	641
DIFFERENCE		-4	...	-4	...	...	+18,955	+241	-185	+37	+93	+435	+199	...	+634	+727

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 1911.

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>J.—WOLFRAMITE.</b>																	
							Cwts.										
Burma	Mergui . . . . .	1	1	..	...	...	160	...	...	...	...	...	...	...	...	...	
	Tavoy . . . . .	3	...	3	...	...	8,234	388	...	5	393	152	...	...	152	545	
TOTAL . . . . .		4	1	3	...	...	8,394	388	...	5	393	152	...	...	152	545	
GRAND TOTAL (WOLFRAMITE) FOR 1911.		4	1	3	...	...	8,394	388	...	5	393	152	...	...	152	545	
" " OF PRECEDING YEAR.		1	...	1	...	...	18	41	25	...	66	11	16	...	27	93	
DIFFERENCE . . . . .		+3	+1	+2	...	...	+8,376	+347	-25	+5	+327	+141	-16	...	+125	+452	
<b>K. MAGNESITE.</b>																	
							Tons.										
Madras	Salem . . . . .	1	...	1	...	...	3,490	150	105	33	288	24	10	5	39	327	
	TOTAL OF PRECEDING YEAR . . . . .		1	...	1	1	1	5,182	250	200	350	800	50	...	50	100	900
	DIFFERENCE . . . . .		...	...	...	-1	-1	-1,692	-100	-95	-317	-512	-26	+10	-45	-61	-573

\* Labour figures included with those for tin.

Baluchistan . . . . .	Quetta-Fishia . . . . .	4	1	3	4	5	5,380	8	...	...	8	1	...	...	1	9
	TOTAL OF PRECEDING YEAR	4	1	3	-	...	6,440	8	...	...	8	...	...	...	...	8
	DIFFERENCE . . . . .	...	..	...	+4	+5	-1,060	...	...	...	...	+1	...	...	+1	+1
Bengal . . . . .	<b>M.—COPPER ORE.</b>															
	Tons.															
	Singhbhum . . . . .	1	1	...	1	4	2,079	423	313	51	787	533	...	3	536	1,323
TOTAL OF PRECEDING YEAR .	1	1	...	...	...	864	80	...	...	80	1,600	1,040	120	2,760	2,840	
DIFFERENCE . . . . .	...	...	...	+1	+4	+1,215	+343	+313	+51	+707	-1,067	-1,040	-117	-2,224	-1,517	
Central Provinces . . . . .	<b>N.—FULLER'S EARTH.</b>															
	Tons.															
	Jabalpur . . . . .	1	...	1	1	1	118	...	...	...	...	...	...	...	...	...
TOTAL OF PRECEDING YEAR .	1	...	1	...	...	84	...	...	...	...	...	...	...	...	...	
DIFFERENCE . . . . .	...	...	...	+1	+1	+34	...	...	...	...	...	...	...	...	...	
Central Provinces . . . . .	<b>O.—CLAY.</b>															
	Tons.															
	Jabalpur . . . . .	3	1	2	1	1	14,927	27	46	...	73	21	7	...	28	101
TOTAL OF PRECEDING YEAR .	3	...	3	...	...	15,223	29	57	...	86	20	6	...	26	112	
DIFFERENCE . . . . .	...	+1	-1	+1	+1	-296	-2	-11	...	-13	+1	+1	...	+2	-11	
Burma . . . . .	<b>P.—GALENA.</b>															
	Cwts.															
Mandalay . . . . .	1	1	...	...	...	...	4	...	...	4	2	2	...	4	8	

\* Labour figures included with those for limestone.

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 1911.

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.	
Madras . . . . .	Kurnool . . . . .	1	...	1	...	...	4	9	9	3	21	...	...	...	...	21
	GRAND TOTAL (GALENA) FOR 1911.	2	1	1	...	...	4	13	9	3	25	2	2	...	4	29
	" " OF PRECEDING YEAR.	1	...	1	...	...	460	1,270	...	...	1,270	635	716	...	1,351	2,621
	DIFFERENCE . . . . .	+1	+1	...	...	...	-456	-1,257	+9	+3	-1,245	-633	-714	...	-1,347	-2,592
Bengal . . . . .	Hazaribagh . . . . .	1	...	1	...	...	3	6	...	...	6	7	...	...	7	13
Burma . . . . .	Mergui . . . . .	1	1	...	...	...	280	30	...	...	30	30	...	...	30	60*
	GRAND TOTAL (TIN) FOR 1911.	2	1	1	...	...	283	36	...	...	36	37	...	...	37	73
	" " OF PRECEDING YEAR.	2	1	1	...	...	1,103	27	...	...	27	44	...	...	44	71
	DIFFERENCE . . . . .	...	...	...	...	...	-820	+9	...	...	+9	-7	...	...	-7	+2

Central Provinces	Jabalpur	2	...	2	1	1	R.—STREATITE. Cwts. 8,816		16	...	...	16	29	18	...	35	51	
	Madras	Kurnool	1	...	1	1	1	3,320	15	12	11	38	...	...	...	...	38	
	GRAND TOTAL (STREATITE) FOR 1911.		3	...	3	2	2	12,136	31	12	11	54	32	13	...	35	89	
	" " OF PREVIOUS YEAR.		4	...	4	1	1	3,468	36	20	..	56	31	30	3	64	120	
DIFFERENCE		-1	...	-1	+1	+1	+8,668	-5	-8	+11	-2	-9	-17	-3	-29	-31		
Madras								S.—GRAPHITE. Cwts. 1,076		10	1	..	11	2	12	...	14	25
	TOTAL of preceding year		1	...	1	...	...	5,171	11	4	...	15	5	11	...	10	31	
	DIFFERENCE		...	...	...	...	...	-4,095	-1	-3	...	-4	-3	+1	...	-2	-6	
	Madras								T.—CORUNDUM. Cwts. 2,167		30	120	75	225	10	30	25	65
TOTAL preceding year		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
DIFFERENCE		+1	...	+1	...	...	+2,167	+30	+120	+75	+225	+10	+30	+25	+65	+200		
Madras									U.—SAMARSKITE. Cwts. 24		2	...	...	2	...	...	...	...
	TOTAL preceding year		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
	DIFFERENCE		+1	+1	...	...	...	+24	+2	...	...	+2	...	...	...	...	+2	

\* Includes labour figures for wolframite,

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 1911.

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.	
	GRAND TOTAL ((ALL MINERALS).	1,058	313	745	548	914	Tons. 12,771,797 Cwts. 61,150 Ounces. 8,277 Carats. 288,216	59,471	32,682	1,503	93,656	32,577	16,289	3,814	52,680	146,336
	GRAND TOTAL PRECEDING YEAR.	781	310	471	442	739	Tons. 12,103,439 Cwts. 87,575 Ounces. 3,269 Carats. 262,032	57,732	30,664	1,382	89,778	33,981	17,299	3,622	54,902	144,680
	DIFFERENCE . . . .	+277	+3	+274	+106	+175	Tons. +668,358 Cwts. +23,575 Ounces. +5,008 Carats. +26,184	+1,739	+2,018	+121	+3,878	-1,404	-1,010	+192	-2,222	+1,656



## APPENDIX I—contd.

Table No. 2.  
Number of mines opened and closed during the year ending 31st  
December 1911.

Province.	District.	Number of mines opened.	Number of mines closed.
<b>A.—COAL.</b>			
BENGAL . . . . .	Hazaribagh { Bokaro-Rangarh . . . . .	3	1
	{ Giridih . . . . .	1	...
	Manbhum { Jharis . . . . .	14	10
	{ Raniganj . . . . .	10	11
	Burdwan . . . . .	10	14
	Sonthal Parganas { Raniganj . . . . .	1	...
	{ Rajmahal . . . . .	...	1
TOTAL		39	37
PANJAB . . . . .	Jhelum . . . . .	2	2
EASTERN BENGAL AND ASSAM	Lakhimpur . . . . .	1	...
TOTAL (COAL)		42	39
<b>B.—MICA.</b>			
BENGAL . . . . .	Monghyr . . . . .	3	1
	Hazaribagh . . . . .	95	76
	Gaya . . . . .	...	4
TOTAL		98	81
MADRAS . . . . .	Nellore . . . . .	15	9
RAJPUTANA . . . . .	Ajmer-Merwara . . . . .	2	2
TOTAL (MICA)		115	92
<b>C.—MANGANESE.</b>			
CENTRAL PROVINCES . . . . .	Bhandara . . . . .	3	1
MADRAS . . . . .	Vizagapatam . . . . .	1	2
TOTAL (MANGANESE)		4	3
CENTRAL PROVINCES . . . . .	Jabalpur . . . . .	3	4
<b>D.—LIMESTONE.</b>			
PANJAB . . . . .	Jhelum . . . . .	1	...
<b>E.—SALT.</b>			
<b>F.—GOLD.</b>			
BOMBAY . . . . .	Dharwar . . . . .	...	1
MADRAS . . . . .	Anantapur . . . . .	1	...
TOTAL (GOLD)		1	1
CENTRAL PROVINCES . . . . .	Jabalpur . . . . .	1	...
<b>G.—IRON.</b>			
BURMA . . . . .	Tavoy . . . . .	2	...
<b>H.—WOLFRAMITE.</b>			
MADRAS . . . . .	Kurnool . . . . .	1	...
<b>I.—GALENA.</b>			
BENGAL . . . . .	Hazaribagh . . . . .	...	1
<b>J.—TIN.</b>			
CENTRAL PROVINCES . . . . .	Jabalpur . . . . .	...	2
<b>K.—STEATITE.</b>			
MADRAS . . . . .	Vizagapatam . . . . .	...	1
<b>L.—GRAPHITE.</b>			
MADRAS . . . . .	Nellore . . . . .	1	...
<b>M.—SAMARSKITE.</b>			
GRAND TOTAL		171	143

## APPENDIX I—concl'd.

Table No. 3.

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, gold, iron ore, magnesite, chromite, copper ore, tin, steatite, graphite, fuller's earth, clay, galena, wolframite, corundum and samarskite.

YEAR.	Coal.	Manganese.	Mica.	Limestone.	Salt.
	Tons.	Tons.	Cwts.	Tons.	Tons.
1902 . . . . .	6,790,507	144,037	21,360	30,091	87,361
1903 . . . . .	6,812,725	171,223	20,100	35,238	99,067
1904 . . . . .	7,561,338	138,733	21,320	50,847	107,413
1905 . . . . .	7,770,471	204,194	25,548	93,170	94,078
1906 . . . . .	9,112,663	436,442	50,438	48,836	118,023
1907 . . . . .	10,526,468	642,082	44,919	73,222	101,703
1908 . . . . .	12,149,020	494,942	46,208	101,569	93,779
1909 . . . . .	11,294,227	357,205	32,011	56,502	126,987
1910 . . . . .	11,387,716	468,669	21,375	81,258	119,867
1911 . . . . .	12,048,726	441,426	31,686	92,692	124,603

Table No. 4.

The following table shows the amount of coal raised, the average number of persons working daily and the death-rates during the years 1902 to 1911 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.
1902 . . . . .	6,790,507	89,503	59	8.69	.66
1903 . . . . .	6,812,725	79,561	67	9.83	.84
1904 . . . . .	7,561,338	82,002	55	7.27	.67
1905 . . . . .	7,770,471	79,506	58	7.46	.72
1906 . . . . .	9,112,663	90,159	80	8.78	.89
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	105,295	160	14.05	1.52
1911 . . . . .	12,048,726	106,598	148	12.28	1.38

Table No. 5.

Statement showing the output of coal, the number of persons employed and the number of tons of coal raised per person employed in and about the coal mines of the principal coal-producing countries of the world.

YEAR.	Country.	Tons of coal raised.	Persons employed.	Tons raised per person employed.
1910	United Kingdom . . . . .	264,417,588	1,049,407	251
1909	United States . . . . .	411,435,581	666,555	617
"	Germany . . . . .	214,011,297	688,196	311
"	Austria . . . . .	48,041,945	194,884	247
"	France . . . . .	37,242,435	190,748	195
"	Belgium . . . . .	23,146,111	143,051	162
"	Nova Scotia . . . . .	5,217,915	12,083	432
"	British Columbia . . . . .	2,400,600	6,418	374
"	Australia . . . . .	8,185,593	26,938	303
"	Natal . . . . .	1,786,583	9,117	195
"	Transvaal . . . . .	3,235,407	8,560	377
"	Japan . . . . .	14,810,441	152,515	97
"	New Zealand . . . . .	1,911,247	4,191	456
1908	Russia . . . . .	25,494,436	174,061	146
		1,061,337,179	3,326,724	319
1911	British India . . . . .	12,048,726	106,598	113

**APPENDIX II.**  
**ACCIDENTS IN MINES.**

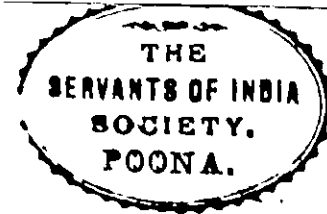


Table No. 1.

List of Fatal Accidents in mines regulated by the Indian Mines Act, 1901, during the year 1911.

Serial number.	Date and hour of accident.	Name and situation of mine.	Name of owner.	Name, sex, age, and occupation of person killed.	Name of mineral worked.	Cause of accident and remarks.
<b>EXPLOSIONS OF FIRE-DAMP—(17 deaths).</b>						
1	12th April, 10 A.M.	Ramnagar Mine, Kulti P. O., Bengal.	Bengal Iron and Steel Co., Ld.	Lakhi Ghatwari, (f.), 12, Coal-carrier.	Coal .	In a mine where fire-damp had hitherto not been detected six persons entered a gallery with naked lights after it had been unworked for only four hours and ignited an accumulation of gas. All the persons sustained burns about the upper portions of their bodies and one, the deceased, a girl of 12 years of age, succumbed to her injuries 29 hours later. Inspection and inquiry made. <i>See Report, page 6.</i>
2	7th June, 5-30 P.M.	Gangutia Mine, Disbargarh P. O., Bengal.	Bengal Nagpur Coal Co., Ld.	Durga Dasadh, (m.), 26, Pump khalassi. Pirtam Dasadh, (m.), 22, Pump coolie.	Coal .	In making an attempt to retrace their steps to the surface through some abandoned workings, which they had passed through without authority earlier in the day, the two deceased, carrying naked lights, lost their way and entered a place full of gas when an explosion occurred which resulted in their deaths. Inspection and inquiry made. <i>See Report, page 8.</i>
3	9th November, 8-35 A.M.	Kendwadih Mine, Kusunda P. O., Bengal.	East Indian Coal Co., Ld.	1. Bandhu Meah, (m.), 35, Contractor. 2. Kastaria, (f.), 45, Kamin. 3. Mustoria, (f.), 35, Kamin. 4. Basharia, (f.), 15, Kamin. 5. Jaharni, (f.), 12, Kamin. 6. Jangli Meah, (m.), 30, Mason. 7. Nazimuddin Meah, (m.), 14, Coolie. 8. Sakni Fashin, (f.), 35, Kamin. 9. Foudi Shonor, (m.), 25, Trolleyman. 10. Jhagho Dasadh, (m.), 25, Hookman. 11. Budhan Barrahoi, (m.), 22, Coolie. 12. Sibcharan Barrahoi, (m.), 16, Coolie. 13. Imamom Meah, (m.), 45, Mason. 14. Bux Meah, (m.), 25, Mason.	Coal .	A fire broke out in an old goaf and, while sixteen men and five women were engaged in building brick stoppings to dam the fire off, an explosion occurred. Four men and all the women were killed outright, one man fell down the shaft when coming up and was killed, and four men succumbed to their injuries after being rescued. The remaining seven men recovered. Inspection and inquiry made. <i>See Report, page 9.</i>

APPENDIX II—contd.

Fatal Accidents, 1911—contd.

Serial number.	Date and hour of accident.	Name and situation of mine.	Name of owner.	Name, sex, age, and occupation of person killed.	Name of mineral worked.	Cause of accident and remarks.
<b>FALLS OF ROOF AND SIDES—(94 deaths).</b>						
<b>(a) Falls of roof—(51 deaths).</b>						
4	4th January, 1 P.M.	Kapasara Mine, Barakar P. O., Bengal.	Abdul Karim & Brothers	Fagu Mahato, (m.), 40, <i>Miner.</i>	Coal .	Deceased was warned of the danger of further undercutting some overhanging roof coal. It is presumed that he disregarded the warning and continued to undercut with the result that a piece, measuring 5' x 3½' x 1½', fell and killed him on the spot. Inspection and inquiry made.
5	8th January, 1 P.M.	Dandot Mine, Dandot P. O., Panjab.	North-Western Railway	Haitam, (m.), 28, <i>Miner.</i>	Coal .	While deceased was cutting coal in the side of a gateway, a fall of shale 9' long by 4' wide by 4" to 6" thick occurred and he was killed instantaneously.
6	11th January, 9 A.M.	Old West Ledo Valley Mine, Margherita P. O., Assam.	Assam Railways and Trading Co., Ltd.	Sumri Ghatwal, (f.), 30, <i>Coal-carrier.</i>	Coal .	Deceased was sitting eating food at the entrance to a "chamber," when she was struck by the fall of about one cwt. of coal from a height of four feet. She died in hospital ten days later from rupture of the spleen. Inspection and inquiry made.
7	17th January, 4 P.M.	Khost Mine, Khost P. O., Baluchistan.	North-Western Railway	Bakhsho, (m.), 40, <i>Miner.</i>	Coal .	While two miners were at work one of them felt a small stone drop from the roof on to his foot and shouted to deceased to come away. As he was crawling away a stone, 7' x 7' x 1' thick, fell from a height of two feet upon him. There were no marks of injuries. He probably died from suffocation.
8	23rd January, 1-30 P.M.	Chitidand Mine, Abbottabad P. O., Panjab.	Panjab Coal Co.	Ghulam Mahomed, (m.), 35, <i>Miner.</i>	Coal .	A short length of long wall face was declared unsafe by reason of a "slip" and was fenced, and all the miners in the neighbourhood were warned of the danger. Deceased, however, deliberately removed the fence when the official was in another part of the mine and commenced to cut coal. About an hour later a piece of shale, measuring 5' x 4' x 2' thick, knocked out a prop and fell from between the "slip" and the face upon him and killed him outright. Inspection and inquiry made.
9	8th February, 5-15 P.M.	Kendwadih Mine, Jamadoba P. O., Bengal.	Hariladih Coal Co., Ltd.	Lachman Gope, (m.), 34, <i>Timbering coolie.</i>	Coal .	Contrary to orders deceased returned to the edge of a goaf from which timber had just been withdrawn and was trapped by a pane of shale, 3' x 2½' x 4", falling on one of his feet and crushing it. He succumbed four hours later from shock. Inspection and inquiry made. <i>See Report, page 13.</i>
10	9th February, 8-30 P.M.	Kurkend Mine, Kusunda P. O., Bengal.	Central Kurkend Coal Co., Ltd.	Teku Rai, (m.), 25, <i>Coal-carrier.</i>	Coal .	On an alarm being given by a sirdar that the roof was weighting close to where two men were working, deceased, Teku, fled under the dangerous roof and was killed outright by a piece of falling coal. The other man fled towards the sirdar and escaped. Inspection and inquiry made.

11	23rd February, 5 A.M.	Tirap Mine, Margherita P. O., Assam.	Assam Railways & Trading Co., Ltd.	Parvu Bhuia, (m.), 25, <i>Coal-filler.</i>	Coal .	Deceased was buried by a fall of small coal which fell from a height of 9 feet from the side of a chamber in thick coal. He probably died of suffocation. Inspection and inquiry made.
12	1st March, 11 A.M.	Khost Mine, Khost P. O., Baluchistan.	North-Western Railway	Khudadad, (m.), 32, <i>Mine mate.</i>	Coal .	A mine carpenter had set a prop and was about to set another, when he heard the roof creak. He shouted to deceased, who was a mine mate and his superior, that the roof was bad, but deceased said it was not and told him to bring another prop. A fall occurred killing deceased. The carpenter escaped.
18	18th March, 4-30 A.M.	Sanctoria Mine, Dishargarh P. O., Bengal.	Bengal Coal Co., Ltd.	Nanda Manjhi, (m.), 30, <i>Miner.</i>	Coal .	Two small galleries intersecting a pillar had been joined during the night. The miners were then told to cut floor coal but deceased went back to the gallery and probably began to cut the side of it. A piece of roof coal, 5' long x 1' wide x 4'6" high, fell on him and killed him on the spot. Inspection and inquiry made.
14	28th March, 4 A.M.	Mohpani Mine, Mohpani P. O., Central Provinces.	Great Indian Peninsular Railway.	Passu Gond, (m.), 22, <i>Coal-cutter.</i>	Coal .	A piece of "ramble" or following stone, under which the miners hewed, instead of taking down, measuring 4' long x 3' wide x 6" to 14" thick, fell upon deceased, causing slight bruises externally. He succumbed however in five days to internal injuries.
15	1st April, 3 P.M.	Khost Mine, Khost P. O., Baluchistan.	North-Western Railway	Saudagar, (m.), 25, <i>Coolie.</i>	Coal .	Owing to recent heavy rains weakening the roof the roof-bar of a supporting set (made of old rails) had been bent by pressure. New sets were got ready but could not be placed until the bent corrugated sheets over the old roof-bars could be raised. The under-manager was supervising the cautious removal of fallen stones above the sheets and deceased was below filling the broken stones into trams when a fall of roof, 9 feet long by 7 feet wide by 10 feet high, occurred from a height of 11 feet. The roof burst through the covering sheets and killed him instantaneously.
16	1st April, 4 P.M.	Akhalpur Mine, Nandi P. O., Bengal.	Hariladih Coal Co., Ltd.	Noha Majhain, (f.), 80, <i>Dust-kamin.</i>	Coal .	Deceased had gone down with food for some of the other kamins and stayed on with them. A piece of dyke weighing about 2 cwts. fell on her. She was dead when picked up. There were no signs of injuries. She probably died from shock. Inspection and inquiry made.
17	8th April, 1 P.M.	Ramkanali Mine, Katrargarh P. O., Bengal.	Brojo Bhusan Trigunait	Asmantalla, (m.), 35, <i>Coal-cutter.</i> Tuna Sheik, (m.), 30, Kurban Sheik, (m.), 30, <i>Coal-carriers.</i>	Coal .	The deceased passed through a fence and began to rob coal from the corner of a pillar. Whilst doing so they were killed on the spot by a fall of roof stone, 10 inches thick, over an area measuring 38 feet in length by 4 to 15 feet in width. Weight about 17 tons. Inspection and inquiry made. <i>See Report, page 13.</i>
18	11th April, 4-30 P.M.	Namdang Mine, Margherita P. O., Assam.	Assam Railways and Trading Co., Ltd.	Budhai Kabar, (m.), 20, <i>Coal-filler.</i>	Coal .	Deceased was loading out coal from an "opening" in the middle seam, 60' x 27' x 16' high, when he was killed by the fall of about 60 lbs. of coal and dirt from the roof near the bolt-hole. Inspection and inquiry made.
19	2nd May, 8-45 A.M.	Bhutgoria Mine, Jamadoba P. O., Bengal.	Aldih Coal Co., Ltd.	Jogiram Gourah, (m.), 30, <i>Timber coolie.</i>	Coal .	Deceased was working for a sirdar and a propping carpenter who were propping round a pillar which was being removed. A stone, 6' x 2' x 1" thick, fell on him breaking over a prop which was under it. He was killed on the spot. Inspection and inquiry made.
20	6th May, 10 A.M.	Gopalichak Mine, Jharia P. O., Bengal.	Gopalichak Coal Co., Ltd.	Karu Manjhi, (m.), 40, <i>Miner.</i> Jobani Majhain, (f.), 32, <i>Carrier.</i>	Coal .	As the deceased miner was taking down some roof coal, standing on a "chair", a piece, 11' x 8' x 2' to 0', fell, overturning the chair. He and the woman carrying coal for him were killed on the spot. Inspection and inquiry made.

APPENDIX II—contd.

Fatal Accidents, 1911—contd.

Serial number.	Date and hour of accident.	Name and situation of mine.	Name of owner.	Name, sex, age, and occupation of person killed.	Name of mineral worked.	Cause of accident and remarks.
<b>FALLS OF ROOF AND SIDES—contd.</b>						
<b>(a) Falls of roof—contd.</b>						
21	25th May, 7 A.M.	Simlabahal Mine, Jharia P. O., Bengal.	Bhalgora Coal Co., Ltd.	Chandbali Bilaspuri, (m.), 34, Coal-cutter.	Coal .	Deceased was employed in widening a narrow gallery and was caught by a fall of some two tons of coal from the roof. The coal fell from a triangular cavity, 12 feet square by 4" to 0" thick, formed by two slippery "joints." He received internal injuries and died about twelve hours later. Inspection and inquiry made.
22	1st June, 3 A.M.	Bhaga Mine, Jharia P. O., Bengal.	Jharia Colliery Co., Ltd.	Ghulam Husain, (m.), 30, Coal-cutter.	Coal .	A sirdar had fired two shots in roof coal for a gang of miners of which deceased was one. In spite of being warned he approached the place where the shots had been fired, and while he was there a fall of coal, 10' to 6' 6" x 8' x 7' thick, occurred, falling from a height of 8 feet. He was killed instantaneously. Inspection and inquiry made.
23	6th June, 5-30 P.M.	Chanch Mine, Barakar P. O., Bengal.	Bengal Coal Co., Ltd.	Doola Manjhi, (m.), 19, Miner.	Coal .	Deceased was cutting away without authority the side of a gallery that had been specially left to support a "slip," when a fall of roof, covering an area of 90 square ft. by 18 in. average thickness, occurred and killed him. The roof was much disturbed by small undisclosed slips. Inspection and inquiry made.
24	8th June, 2 P.M.	Dishargarh Mine, Dishargarh P. O., Bengal.	Equitable Coal Co., Ltd.	Somi Baurin, (f.), 30, Coal-carrier.	Coal .	While the deceased was sitting on the pit bottom road waiting to go up the shaft, about a ton of coal fell from the roof upon her. She died shortly afterwards. Inspection and inquiry made. <i>See Report, page 14.</i>
25	20th June, 2 P.M.	Lomehanchi Mine, Kodarna P. O., Bengal.	Chota Nagpur Mica Syndicate, Ltd.	Khedu Gope, (m.), 25, Miner.	Mica .	The manager had ordered work to be stopped in a mine for the monsoon season. A few days after deceased and another man went to work there. Deceased went into a small tunnel to shelter from the rain, and a fall of roof and side, 11' x 3' x 2', probably weakened by rain, fell and killed him instantaneously. Inspection and inquiry made.
26	27th June, 2 P.M.	Serampur Mine, Giridih P. O., Bengal.	East Indian Railway Co.	Samtalli Meah, (m.), 18, Mistri.	Coal .	While deceased was assisting a sirdar to set a sprag against the stone roof, a piece, 8' long x 1½' wide by 1' thick, fell from a height of 16' upon him. He died shortly after.
27	7th July, 12 Noon.	Serampur Mine, Giridih P. O., Bengal.	East Indian Railway Co.	Jugal Chamar, (m.), 23, Miner.	Coal .	During the process of clearing a bolt-hole of loose coal to set a cog, a fall of roof coal, measuring 16' x 7' x 5½', occurred killing the deceased on the spot and injuring another man. They had been warned of the danger by an official who heard the roof weighting as he approached the place, but they failed to stand clear in time. Inspection and inquiry made.
28	19th July, 2-30 P.M.	New East Ledo Mine, Margherita P. O., Assam.	Assam Railways and Trading Co., Ltd.	Bami Kayasta, (f.), 35, Shoveller.	Coal .	Deceased was shovelling coal down a road, 8 feet wide by 4 feet high, when about a ton of coal fell from between the props and buried her. General crush was afterwards noticed in this part of the mine and was the probable cause of the accident. She was killed instantaneously. Inspection and inquiry made.

80	3rd August, 7-30 A.M.	Barra Dhemio Mine, Sitarampur P. O., Bengal.	Barra Dhemio Coal Co., Ltd.	Badal Manjhi. (m.), 45, <i>Miner.</i>	Coal .	Four persons were making their way out of the mine, when a piece of shale, measuring 4' x 2½' tapering to 10" x 8" thick, fell from the roof of a gallery and struck deceased who was hurt internally so severely that he died 12 hours later. Another man was seriously injured but recovered. Inspection and inquiry made. <i>See Report, page 14.</i>
80	8th August, 7 A.M.	Jamadoba Mine, Jamadoba P. O., Bengal.	Indian Collieries Syndicate, Ltd.	Guiram Kora, (m.), 30, <i>Coal-cutter.</i> Fadni Koran, (f.), 25, <i>Coal-carrier.</i> Tribhuban Bhumij, (m.), 35 <i>Coal-cutter.</i>	Coal .	Deceased were extracting the last portion of a pillar in "broken" working, when a fall of roof shale, measuring 40 ft. square x 30' x 3' 6" thick, occurred. The timber was knocked out and they were knocked down and killed on the spot. One other man escaped. Inspection and inquiry made. <i>See Report, page 14.</i>
81	8th August, 1-30 P.M.	Kendwadih Mine, Jamadoba P. O., Bengal.	Hariladih Coal Co., Ltd.	Udal Bauri, (m.), 35, <i>Coal-cutter.</i>	Coal .	Deceased was found cutting coal in the face of a fenced off gallery and was sent out by the sirdar. Shortly after he returned and recommenced work and was killed by the fall of a slab of roof shale, weighing about half a ton and measuring 8' 3" x 2' 4" x 6". Inspection and inquiry made. <i>See Report, page 15.</i>
82	12th August, 7 P.M.	Sudamdih Mine, Bhujudih P. O., Bengal.	Sudamdih Coal Co., Ltd.	Bopan Hari, (m.), 40, Mohar Hari, (m.), 35, <i>Coal-cutters.</i>	Coal .	Deceased went through a fence and had no sooner begun to rob coal from a pillar, when about a ton of coal and stone fell from the roof and killed them on the spot. The gallery was 25 feet in height. Inspection and inquiry made. <i>See Report, page 15.</i>
83	14th August, 2 P.M.	Borra Mine, Sitarampur P. O., Bengal.	New Beerbhun Coal Co., Ltd.	Chand Mony Majhain, (f.), 14, <i>Coal-carrier.</i>	Coal .	In a coal roof full of pronounced "joints" running parallel with the sides of a gallery, a nicking 6' long had been made down the centre of the gallery which unlocked a slab of coal, measuring 6½' x 3' x 1' 9" thick, and allowed it to fall from a height of 9 feet. Deceased was loading up coal from under it at the time and was killed on the spot. Inspection and inquiry made.
84	9th September, 2-30 A.M.	Murulidih Mine, Mohoda P. O., Bengal.	Bengal Coal Co., Ltd.	Kulu Muanh, (m.), 10, <i>Stone-cutter.</i>	Coal .	Deceased was one of a gang of seven stone cutters who were building a pack wall. Whilst at work a stone, 7' x 2' x 2', fell from the roof. He was struck on the head and killed on the spot. Inspection and inquiry made. <i>See Report, page 15.</i>
85	12th October, 10 P.M.	Brahmanbarari Mine, Jamadoba P. O., Bengal.	East Indian Coal Co., Ltd.	Ashu Majhain, (f.), 22, <i>Dust-loader.</i>	Coal .	Deceased was injured by the fall of about a ton of coal from the roof of a gallery, 20 feet in height. She died on the following day. Inspection and inquiry made.
86	24th October, 1-30 A.M.	South Kustore Mine, Kustore P. O., Bengal.	Raniganj Coal Association, Ltd.	Dukhan Chamar, (m.), 35, <i>Coal-cutter.</i>	Coal .	Deceased was reducing a coal "knob" in a "broken" district when a fall took place in the goaf. The removal of lateral support thus caused swayed out the timber and broke down the "knob" and a portion of the roof. The fallen mass was from 5' to 10' long by 4' to 10' wide and 12' high, and would weigh about 20 tons. Whilst trying to make his escape he ran into a prop, was thrown back under the edge of the fall, and crushed to death. Inspection and inquiry made.
87	24th October, 2 P.M.	Tirap Mine, Margherita P. O., Assam.	Assam Railways and Trad- ing Co., Ltd.	Kanni Chamar, (m.), 30, <i>Sirdar.</i>	Coal .	Deceased was buried by the collapse of a timbered road near the entrance to a "chamber". A miner had shouted that the coal was about to fall, but deceased shouted back that there was no danger. Inspection and inquiry made. <i>See Report, page 16.</i>
88	6th November, 1-30 P.M.	West Lodo Valley Mine, Margherita P. O., Assam.	Assam Railways and Trad- ing Co., Ltd.	Bohari Ahir, (m.), 20, <i>Basket-filler.</i>	Coal .	Whilst deceased was filling coal in a "chamber," 12' high, a fall of about 6 cwts. of stone came away. He sustained a compound fracture of a leg and died in hospital on the following day. Inspection and inquiry made.

APPENDIX II—contd.

Fatal Accidents, 1911—contd.

Serial number.	Date and hour of accident.	Name and situation of mine.	Name of owner.	Name, sex, age and occupation of person killed.	Name of mineral worked.	Cause of accident and remarks.
<b>FALLS OF ROOF AND SIDES—contd.</b>						
<b>(a) Falls of roof—concld.</b>						
39	9th November, 12 Noon.	West Gopalichak Mine, Kusunda P. O., Bengal.	Gopalichak Coal Co., Ltd.	Marat Dhoi, (m.), 25, Coal-cutter.	Coal .	Deceased left his proper working place and commenced to cut roof coal elsewhere, although warned by other miners to desist. A mass of 6 tons of coal, measuring 7' x 20' x 2' 6", fell from the roof 10 feet above. He was killed on the spot. A sirdar had visited the place twice during the shift, but at those times deceased was in his proper working place. Inspection and inquiry made.
40	25th November, 2-30 P.M.	Gamrala Mine, Pind Dadan Khan P. O., Panjab.	Thakur Dass Ramji Dass	Mirza Khan, (m.), 21, Hakam Khan, (m.), 40, Mohamed Khan, (m.), 15, Miners.	Coal .	On a long wall face which had recently been declared unsafe by an official and fenced, the deceased commenced to cut coal after breaking down the fence. They worked for about two hours when a slab of roof shale, measuring 10½' x 2½' x 2' thick, fell upon them killing two of them on the spot and fracturing the skull of the third, who died six hours later. The fall occurred between the front line of chocks and the face in a width of only three feet. Inspection and inquiry made.
41	10th December, 1-30 A.M.	Gopalichak Mine, Jharra P. O., Bengal.	Gopalichak Coal Co., Ltd.	Pairn Meah, (m.), 35, Bunsi Dosadh, (m.), 34, Miners.	Coal .	Deceased were working at a coal pillar in an area from which the pillars were being extracted. A fall of some 12 tons of side and roof coal took place, and knocked out the timber. They were caught and killed on the spot. Inspection and inquiry made. <i>See Report, page 16.</i>
42	15th December, 6 A.M.	Khost Mine, Khost P. O., Baluchistan.	North-Western Railway	Umra, (m.), 38, Miner.	Coal .	Two shot holes had been drilled into the roof and charged ready for blasting. A piece of roof stone, 5' long by 2' wide by 14" thick, fell from an unseon slip upon deceased. He died five days later. The drilling of the holes probably loosened the stone.
43	20th December, Midnight.	Chanich Mine, Barakar P. O., Bengal.	Bengal Coal Co., Ltd.	Panu Manjhi, (m.), 26, Coal-cutter.	Coal .	Deceased entered a fenced gallery to rob the side of a pillar, after he had struck a few blows with his pick a mass of sandstone, measuring 16' x 9' x 2' thick, fell from a height of 8½ feet upon him and killed him outright. A pick and a basket were found by the side of his body. Inspection and inquiry made.
44	22nd December, 5 A.M.	Khost Mine, Khost P. O., Baluchistan.	North-Western Railway	Abdul Mahomed, (m.), 28, Miner.	Coal .	A small sharp piece of roof stone fell upon deceased, cutting his forehead. He went home and many hours after went to hospital to be treated. The base of the skull proved to have been fractured and death followed.
45	29th December, 6 A.M.	Upper Ledo Mine, Margherita P. O., Assam.	Assam Railways and Trading Co., Ltd.	Ramani, (f.), 24, Coal-carrier.	Coal .	The miners were about to cease work at the end of the day, when a sudden crush occurred in an "opening" or "chamber" without warning. They ran out but deceased was caught by a fall of two tons of coal and killed. Two other persons were injured but have recovered. A sirdar was present. Inspection and inquiry made.



## (b) Falls of sides—(48 deaths).

46	10th January, 9-30 A.M.	Brahmanbarari Mine, Jamadoba P. O., Bengal.	East Indian Coal Co., Ld.	Jogi Ram Dass, (m.), 36, <i>Coal-cutter.</i>	Coal	Deceased went beyond a fence and began to cut coal from the corner of a pillar. As soon as he had undercut as far as a smooth "joint," a mass of about 5 tons of coal fell away and killed him on the spot. Inspection and inquiry made.
47	11th January, P.A.M.	Benahir Mine, Jharia P. O., Bengal.	Standard Coal Co., Ld.	Sukharia Chamarin, (f.), 35, <i>Coal-carrier.</i>	Coal	Floor coal was being cut in a gallery already 30 feet high. A miner wrongfully undermined the corner of a pillar with the result that a mass of 10 tons of coal fell from a slippery "joint." He escaped, but deceased, who was passing the place at the time, was struck and received injuries from which she died two days later. Inspection and inquiry made. <i>See Report, page 16.</i>
48	1st March, 5-30 P.M.	Burragarh Mine, Jharia P. O., Bengal.	Panjab and Bengal Coal Co., Ld.	Kunji Kurmi, (m.), 20, <i>Coal-cutter.</i>	Coal	Deceased remained behind when the rest of the workmen had finished work, and went into an unused gallery, where he began to cut overhanging coal from the side of a pillar. Whilst doing so a mass of coal, 7' x 4' x 30" to 10", weighing about 2 tons, fell upon him causing injuries from which he died two hours later. Inspection and inquiry made.
49	11th March, 2-30 P.M.	Kusunda Mine, Kusunda P. O., Bengal.	Kusunda and Nayadi Collieries, Ld.	Sohori Bhunia, (f.), 35, <i>Coal-carrier.</i>	Coal	Deceased and another woman were carrying coal in a district which was being gonfed, when about 2 cwt. of coal fell from an area of about 2' x 3' at the top of the corner of a pillar and from a height of 14 feet. They were struck by the falling coal. Deceased sustained cuts on her body and an internal strain, due to falling, from which she died nine days afterwards. Inspection and inquiry made.
50	27th March, 11-30 P.M.	Kondwadih Mine, Jamadoba P. O., Bengal.	Hariladib Coal Co., Ld.	Feringhi Toli, (m.), 45, <i>Coal-cutter.</i>	Coal	Whilst deceased and another miner were undercutting at the dip side of a pillar in a "broken" district a wedge of coal, 9' x 6' x 40" to 0", and weighing about two tons, fell away from a "joint" and struck them. He was killed on the spot and the other miner sustained a severe injury to one of his feet. Inspection and inquiry made. <i>See Report, page 17.</i>
51	4th April, 1 P.M.	Chandametta Mine, Pench Valley P. O., Central Provinces.	Pench Valley Coal Co., Ld.	Bails Garpagaran, (f.), 52, <i>Coal-filler.</i>	Coal	As deceased and a miner were raising a basket of coal, a piece of side coal, 8 feet long by 5½ feet high by 2½ feet thick, fell upon them and injured them both. Deceased died twenty-four days afterwards from the effect of the injuries received. Inspection and inquiry made.
52	4th April, 10-30 P.M.	Kantapahar Mine, Panuria P. O., Bengal.	Barakar Coal Co., Ld.	Lobin Manjhi, (m.), 25, <i>Miner.</i>	Coal	Deceased started to rob the corner of a pillar close to the end of the haulage road and consequently close to the tubs. A piece of overhanging coal, 2' x 2' x 1½', fell from a height of 7 feet and crushed his left leg. The leg was amputated, but he died after the operation from shock. Inspection and inquiry made.
53	6th April, 4-30 P.M.	Murwara Mine, Murwara P. O., Central Provinces.	J. N. Mitter	Dhanna, (m.), 15, <i>Coolie.</i>	Limestone	Deceased went into a limestone quarry to fetch some water. A fall occurred from the side of the quarry and struck him. He was thrown into the water and drowned.
54	26th April, 8-30 P.M.	Charuki Mine, Domchanch P. O., Bengal.	F. F. Chrestien & Co.	Saniehari Moshairni, (f.), 40, Pachia Moshairni, (f.), 10, Tetri Turin, (f.), 80, <i>Earth-carriers.</i> Baro Jola, (m.), 20, <i>Miner.</i>	Mica	As deceased were carrying mica to an unworked part of the mine, where it was to be sorted, the hanging wall (schist) collapsed for a length of 25 feet and a height of 24 feet, killing Pachia, Tetri, and Baro immediately. Saniehari died on the way to hospital. The schist that fell averaged about 2 feet in thickness. Inspection and inquiry made. <i>See Report, page 17.</i>

APPENDIX II—contd.

Fatal Accidents, 1911—contd.

Serial number.	Date and hour of accident.	Name and situation of mine.	Name of owner.	Name, sex, age and occupation of person killed.	Name of mineral worked.	Cause of accident and remarks.
<b>FALLS OF ROOF AND SIDES—contd.</b>						
<b>(b) Falls of sides—contd.</b>						
55	1st May, 1 A.M.	Baraboni Mine, Asansol P. O., Bengal.	Baraboni Coal Concern, Ltd.	Mungla Bux, (m.), 48, <i>Coal-cutter.</i>	Coal	Deceased with others was told to get a piece of coal off a side which had been left hanging after a pillar had been got in an old road, which the manager was opening out to get at some pillars. Instead of attacking it at the side he tried to put a shot hole in front and the mass, which was 7' x 4' x 2' 6" high, fell from a height of ten feet on him and killed him at once. Inspection and inquiry made.
56	4th May, 5 P.M.	Khas Jharia Mine, Jharia P. O., Bengal.	J. R. Agarwalla	Lakhu Bauri, (m.), 32, <i>Coal-cutter.</i>	Coal	Deceased had just commenced to rob coal from the side of a fenced gallery, when he was caught by a fall of side coal, measuring 33 feet in length by 11 feet in height and 4' to 0" thick, and weighing 26 tons. Inspection and inquiry made.
57	17th May, 8-30 A.M.	Bhaga Mine, Jharia P. O., Bengal.	Jharia Colliery Co., Ltd.	Thakar Das Bauri, (m.), 30, <i>Coal-cutter.</i>	Coal	Whilst robbing coal in an unused gallery deceased was killed by the fall of some 50 tons of coal from the side of a pillar. The fall was 17' long by 24' high and 4' to 2' thick. Inspection and inquiry made.
58	3rd June, 1-30 P.M.	Kantapahari Mine, Panuria P. O., Bengal.	Barakar Coal Co., Ltd.	Talu Manjhi, (m.), 35, <i>Miner.</i>	Coal	Deceased was put to work on a small pillar in a pillar cutting area about half an hour previous to the accident. Instead of beginning at the rise side of the pillar as he had been instructed to do, he went, in spite of the protestations of his wife and two other miners, who were working on the next pillar, to the bottom of the pillar to get a loose piece of overhanging coal. Almost immediately the piece, weighing about a ton, fell from a height of about 5 feet and a portion falling on him killed him instantly. Inspection and inquiry made.
59	25th June, 5-30 A.M.	Borraagarh Mine, Jharia P. O., Bengal.	Panjab and Bengal Coal Co., Ltd.	Bonomali Kora, (m.), 30, <i>Coal-cutter.</i> Saraboni Korin, (f.), 25, <i>Coal-carrier.</i>	Coal	Whilst cutting side coal, deceased were killed by the fall of a slab of coal, 3' x 6' x 1' 6", which fell on them from a height of 7½ feet. Inspection and inquiry made. <i>See Report, page 18.</i>
60	22nd July, 4 P.M.	Nodiha Mine, Ukhara P. O., Bengal.	Gosta Behari Lall Singh and others.	Bistu Bauri, (m.), 40, Ajir Shah, (m.), 16, Babulal Sheik, (m.), 30, <i>Sinkers.</i>	Coal	Four men had just gone down to work in the bottom of a pit, which was being converted into an incline, when the side wall collapsed, burying the three deceased and partially burying the fourth man. The latter was rescued but the others were killed. Inspection and inquiry made. <i>See Report, page 18.</i>
61	3rd August, 1 P.M.	Ekra Khas Mine, Bansjora P. O., Bengal.	Maharaja M. C. Nandi	Sukor Rajwar, (m.), 40, <i>Coal-cutter.</i>	Coal	Deceased went beyond a fence into an unused gallery and, whilst robbing a pillar, was killed by the fall of a ton of side coal, measuring 4' 6" x 4' 6" x 1' 3". Inspection and inquiry made. <i>See Report, page 18.</i>

62	5th August, 2-30 A.M.	Simlabahal Mine, Jharia P. O., Bengal.	Bhaigora Coal Co., Ltd.	Lineu Bilaspuri, (m.), 24, Coal-cutter.	Coal .	Deceased was cutting coal in a gallery 10½ feet high, which was being driven through a pillar, when a mass of coal, 7' high × 3'—1' wide × 20' thick, fell away from smooth "joints" in the top 7 feet in the corner of the face. He was killed on the spot. Inspection and inquiry made.
63	8th August, 10 P.M.	Bhowra Mine, Jamadoba P. O., Bengal.	Eastern Coal Co., Ltd.	Jitto Gorai, (m.), 40, Miner.	Coal .	Deceased was working in the lower section of the seam when a triangular mass of coal, 38' × 15' × 23' high, fell from the corner of a pillar in the upper section workings. The coal partition between the two workings was broken through and deceased was overwhelmed and died from suffocation, whilst efforts to rescue him were in progress. About 100 tons of coal fell. Inspection and inquiry made.
64	15th August, 7-30 A.M.	Lower Tikak Mine, Margherita P. O., Assam.	Assam Railways and Trading Co., Ltd.	Ramu Gasbi, (m.), 27, Hagari Koch, (m.), 40, Miners. Siki Tamli, (f.), 20, Coal-carrier, Fagu Manjhi, (m.), 35, Miner.	Coal .	Whilst deceased were at work in a "chamber," 63' long × 41' wide × 14' high, a mass of some 40 tons of coal fell away from the higher side and buried them. They were killed instantly. Inspection and inquiry made.
65	25th August, 6 P.M.	Panchgatchia Mine, Sitarampur P. O., Bengal.	Lutchipur Coal Co., Ltd.	Fagu Manjhi, (m.), 35, Miner.	Coal .	Deceased was cutting away the corner of a pillar that he had previously undercut, when it came away from a "slip." In stepping back to avoid being struck he fell over a heap of coal he had stacked immediately behind him and received a few abrasions. He died from shock seven hours later. Inspection and inquiry made. <i>See Report, page 18.</i>
66	15th September, 4-30 P.M.	Tharghatia Mine, Ganwan P. O., Bengal.	Johur Mull and Suundur Mull.	Thanu Gope, (m.), 14, Coolie.	Mica .	Deceased was one of a line of men passing up earth from one to the other. A piece of the side of the quarry weighing about 10 tons, fell upon him and killed him.
67	24th September, 7 A.M.	Lodna Mine, Jharia P. O., Bengal.	Lodna Colliery Co., Ltd.	Jibia Rajwarin, (f.), 26, Coal-carrier.	Coal .	A miner was illegally robbing coal in an old gallery which was fenced off, when about a ton of coal, measuring 7' × 4' × 1', fell from the corner of a pillar and killed deceased who carried coal for him. The miner absconded. Inspection and inquiry made.
68	25th September, 11-30 P.M.	Bhuskajuri Mine, Asansol P. O., Bengal.	Bhuskajuri Coal Co., Ltd.	Jugal Bauri, (m.), 26, Miner. Chikonta Bauri, (m.), 13, Carrier.	Coal .	The elder of the two deceased was told to cut floor coal. It was evident that he had left this work and commenced to cut away a corner of a pillar a few feet away. A fall chiefly of side coal, but partly of roof coal, of about 7 cwt., fell from a height of 12 feet. They were both dead when found. Inspection and inquiry made.
69	26th September, 2-30 P.M.	Jamadoba Mine, Jamadoba P. O., Bengal.	Indian Collieries Syndicate, Ltd.	Agni Korin, (f.), 24, Coal-carrier.	Coal .	Deceased was carrying coal for a miner, who was illegally robbing a pillar in an old fenced off gallery, when she was killed by the fall of about a ton of coal from the corner of a pillar. Inspection and inquiry made.
70	12th October, 2-45 P.M.	Sendra Mine, Bansjora P. O., Bengal.	Sendra Coal Co., Ltd.	Somnath Kurmi, (m.), 40, Coal-cutter.	Coal .	Deceased was robbing a pillar on a travelling road, when a mass of coal, 10' long × 5' high × 2' thick, weighing about 3 tons, fell from the side upon him. He died six days later. Inspection and inquiry made. <i>See Report, page 19.</i>
71	17th October, 11-30 P.M.	Aldih Mine, Sitarampur P. O., Bengal.	Aldih Coal Co., Ltd.	Boni-Baurin, (f.), 50, Coal-carrier.	Coal .	Deceased was loading coal which had been robbed from the side of a pillar, when a slab of coal, measuring 4' × 2' × 2', and weighing about half a ton, fell from the side. She was knocked down and received internal injuries from which she died a few hours later. Inspection and inquiry made.
72	9th November, 4 A.M.	Sitalpur Mine, Dishargarh P. O., Bengal.	Bengal Coal Co., Ltd.	Turi Majhain, (f.), 21, Coal-carrier.	Coal .	A piece of coal, measuring 20½' long × 7' high × 2" tapering to 3" thick, fell from the side of a pillar, as deceased was carrying coal past it. "Weighting" was heard by the husband, who was near at hand, and he shouted a warning to her, but she was unable to get clear in time and was knocked down. She died immediately on arrival at the surface. Inspection and inquiry made.

APPENDIX II—contd.

Fatal Accidents, 1911—contd.

Serial number.	Date and hour of accident.	Name and situation of mine.	Name of owner.	Name, sex, age, and occupation of person killed.	Name of mineral worked.	Cause of accident and remarks.
<b>FALLS OF ROOF AND SIDES—contd.</b>						
<b>(b) Falls of Sides—concl'd.</b>						
73	18th November, 4 P.M.	Kurhbari Mine, Giridih P. O., Bengal.	East Indian Railway Co.	Kinu Meah, (m.), 18, <i>Coal-cutter.</i>	Coal	A piece of coal, measuring 20' × 6½' × 2' thick, fell from the side of a pillar, situated at the edge of a large goaf, and entrapped deceased, as he was trying to reach a place of safety. He died two and a half hours later from shock and concussion of the brain. Inspection and inquiry made.
74	24th November, 5 A.M.	Tetturia Mine, Katrasgarh P. O., Bengal.	New Tetturia Coal Co., Ld.	Nana Manjhi, (m.), 40, <i>Miner.</i>	Coal	Deceased went through a fence and began to rob coal from a pillar. A mass of coal, 11' long by 10' high by 18" thick, fell from the side and killed him on the spot. Inspection and inquiry made.
75	24th November, 8 P.M.	Bhulanbarari Mine, Jharia P. O., Bengal.	Bhulanbarari Coal Co., Ld.	Minu Chamar, (m.), 30, <i>Coal-cutter.</i>	Coal	Deceased went into an old gallery and began to rob coal from the corner of a pillar. A slab of coal, about 3' × 2' × 1" thick, fell on his head from a height of 8 feet. He sustained an injury to his neck and died some hours later. Inspection and inquiry made. <i>See Report, page 19.</i>
76	28th November, 5 P.M.	Parsatari Mine, Fatehpur P. O., Bengal.	Ram Krishna Tewari	Ancha Mushar, (m.), 20, <i>Miner.</i> Chetia Gopin, (f.), 16, <i>Coolie.</i>	Mica	A pane of decomposed pegmatite, measuring 8 feet square by 12 inches thick, became detached from the side of an open excavation 18 feet high and fell upon several persons, who were working below. The two deceased were completely buried and, before they could be extricated, were smothered. Inspection and inquiry made. <i>See Report, page 19.</i>
77	27th December, 5-30 P.M.	Dharmaband Mine, Katrasgarh P. O., Bengal.	H. A. Pringle	Charga Manjhi, (m.), 35, <i>Coal-cutter.</i>	Coal	After the other coolies had left the mine, deceased remained behind and attempted to cut coal in a place away from his working place, against orders. A stone, 3' × 3' × 2' 6" thick, suddenly fell and killed him on the spot. Inspection and inquiry made.
78	28th December, 3 A.M.	Kusunda Mine, Kusunda P. O., Bengal.	Kusunda and Nayadi Collieries, Ld.	Munbar Rai, (m.), 35, <i>Coal-cutter.</i>	Coal	Deceased was helping to get coal from a pillar. Another miner began to rob the opposite pillar and, while doing so, caused a mass of coal, 12' to 6' long by 7' high by 3' thick, to fall from a slip upon deceased, who was loading a basket with coal, killing him on the spot. Inspection and inquiry made.
<b>IN SHAFTS—(18 deaths).</b>						
<b>Whilst ascending and descending by machinery—(1 death).</b>						
79	7th May, 10 P.M.	Jamgram Mine, Panuria P. O., Bengal.	Barakar Coal Co., Ld.	Madhu Rai, (m.), 30, <i>Miner.</i>	Coal	Deceased fell out of the sinking bucket shortly after leaving the bottom, to ride up a pit 432' deep. There is not sufficient evidence to prove the cause, but it is supposed the banksman did not give the signal "men riding" to the winding engine khalassai and the latter raised the bucket sharply, giving it a jerk, which threw deceased out. Inspection and inquiry made.

Falling into the shafts from the surface—(1 death).					
80	22nd April, 12-45 P.M.	Badrachak Mine, Sijua P. O., Bengal.	Badrachak Coal Mining Co., Ltd.	Charan Koiri, (m.), 24, <i>Munshi.</i>	Coal . . . Deceased by some unknown means fell down a fenced shaft, 183 feet deep, and died shortly after he was brought to the surface. Inspection and inquiry made.
Falling from part of the way down—(2 deaths).					
81	9th May, 8 P.M.	Gladstone Mine, Mohulia P. O., Bengal.	Cape Copper Co., Ltd.	Mongla, (m.), 16, <i>Drill boy.</i>	Copper . . . Deceased was taking a message from No. 2 to No. 1 level and, slipping on a ladder, fell and fractured his skull. No one actually saw him fall. Inspection and inquiry made.
82	18th June, 9-30 A.M.	Sijua Mine, Sijua P. O., Bengal.	Sijua Coal Co., Ltd.	Jitu Manjhi, (m.), 35, <i>Coal-cutter.</i>	Coal . . . Deceased was supposed to have been pillar robbing in old workings and to have put out his lamp to escape detection. He crossed a substantial rail fence and fell down a staple shaft, 23 feet deep, sustaining injuries from which he died two days later. Inspection and inquiry made.
Things falling from the surface—(3 deaths).					
83	19th May, 11-30 A.M.	Katras Mine, Katrasgarh P. O., Bengal.	Nowagarh Coal Co., Ltd.	Hiru Meah, (m.), 27, <i>Pump khalassi.</i>	Coal . . . Deceased was standing on a pump platform and was struck on the head by a brick, which fell from the walling at the top of the shaft. The brick was dislodged by coolies, who were attempting to pull up a rope ladder hanging down the wall of the shaft. Inspection and inquiry made.
84	6th July, 12-15 A.M.	Saltore Mine, Disbargarh P. O., Bengal.	Saltore Coal Co., Ltd.	Mati Lal Roy, (m.), 29, <i>Fitter mistri.</i>  Tenia Kahar, (m.), 35, <i>Pump khalassi.</i>	Coal . . . While the two deceased were attending to a sinking pump at a depth of 487 feet, the girders supporting the pump at the surface buckled and partially demolished the brickwork in which they were set. Some of the brick work fell down the shaft and struck the men, killing one outright and injuring the other so badly that he died two days later. Inspection and inquiry made. <i>See Report, page 20.</i>
Things falling from part of the way down—(3 deaths).					
85	9th January, 1 A.M.	Titilmuri Mine, Sijua P. O., Bengal.	Titilmuri Coal Co., Ltd.	Budhan Rai, (m.), 28, <i>Miner.</i>	Coal . . . Deceased was loading a bucket with coal in the shaft, when he was struck by a piece of stone, weighing about 2 lbs., which fell from the side of the shaft. He was killed instantaneously. Inspection and inquiry made.
86	13th January, 7 A.M.	Kurkend Mine, Kusunda P. O., Bengal.	Central Kurkend Coal Co., Ltd.	Sidani Malla, (m.), 22, <i>Pump khalassi.</i>	Coal . . . Three ranges of steam and water pipes were partially supported in a shaft by steel girders carried in hitches in the shaft walls and built in with brickwork. At the bottom of the shaft a pump was suspended. Owing to vibration set up in the pipes by the working of the pump and to the expansion of the pipes, when under steam, the brickwork became loose and a brick fell down the shaft, whilst deceased and another man were engaged in attending to the pump. He was struck on the head and killed on the spot. Inspection and inquiry made. <i>See Report, page 21.</i>
87	9th April, 8 P.M.	South Kustore Mine, Kustore P. O., Bengal.	Raniganj Coal Association, Ltd.	Amir Meah, (m.), 35, <i>Stone-cutter.</i>	Coal . . . While deceased was at work at the bottom of the shaft, a stone fell from somewhere in the shaft and broke his skull. He died shortly after being brought to the surface. The exact point in the shaft from which the stone fell could not be ascertained, nor could its size, as it was not identified. Inspection and inquiry made.

APPENDIX II—contd.

Fatal Accidents, 1911—contd.

Serial number.	Date and hour of accident.	Name and situation of mine.	Name of owner.	Name, sex, age, and occupation of person killed.	Name of mineral worked.	Cause of accident and remarks.
<b>IN SHAFTS—consolid.</b>						
<b>Miscellaneous—(8 deaths).</b>						
88	30th April, 5-30 A.M.	Loyabad Mine, Bansjora P. O., Bengal.	Barakar Coal Co., Ltd.	Mohar Chamar, (m.), 30, Coal-cutter.	Coal .	Owing to a mistake by the surface hookman the cage was raised from the bottom, whilst men were lifting a derailed tub in the cage. The tub fell out upon the men and deceased was so severely injured that he died twelve days afterwards. Inspection and inquiry made.
89	18th May, 12 A.M.	Gladstone Mine, Mohulia P. O., Bengal.	Cape Copper Co., Ltd.	Satrugghan, (m.), 26, Underground coolie.	Copper .	Deceased was sented on the skip filling it. While thus engaged, the signal to hoist was given by some unauthorized person and he was crushed between the skip and the hanging wall and killed. Inspection and inquiry made.
90	29th October, 5 P.M.	Ballarpur Mine, Ballarpur P. O., Central Provinces.	Government of India	Durjun Zuri, (m.), 45, Coolie.	Coal .	Deceased was on a temporary scaffold under one of the cages at the top of a shaft, fixing a guide block, when the cage descended from a height of 8 feet and crushed him so severely that he died six days afterwards. The winding engineman stated he received instructions to lower the cages but the evidence of all on the pit top went to disprove this.
<b>SUFFOCATION BY GASES—(2 deaths).</b>						
91	10th December, 8 A.M.	Tikak Mine, Margherita P. O., Assam.	Assam Railways and Trading Co., Ltd.	Bahadur Kora, (m.), 43, Sirdar. Mohadew Bauri, (m.), 35, Brick mistri.	Coal .	Whilst engaged in plastering a fire dam, deceased were overcome by a sudden inburst of carbon dioxide, which probably came from old workings through fissures in the coal, and suffocated. Their bodies were recovered that evening. Inspection and inquiry made. See Report, page 21.
<b>BY EXPLOSIVES—(7 deaths).</b>						
92	5th January, 7-15 A.M.	North Anantapur Mine, Morrison P. O., Madras.	North Anantapur Mines, Ltd.	Nichiyil Naidu, (m.), 25, Valan, (m.), 30, Coolies.	Gold .	The blaster had fired seven shots. He noticed that a socket was left where one of the shot holes had been and put a stone over it, warning the workmen not to touch it. Nichiyil Naidu put a jumper into the hole in which some explosive remained. It went off, killing him instantaneously and injuring Valan so severely that he died on the following day. Inspection and inquiry made.
93	20th July, 4-40 P.M.	Pagaye Mine, Tavoy P. O., Burma.	Rangoon Mining Co., Ltd.	Iaw Se, (m.), 34, Miner.	Wolframite.	Three shot holes in an adit had been charged and the charges lit. Deceased imagined all three charges had gone off and entered the adit. He was knocked over by the third charge which went off at that moment. He died from the injuries received thirteen days afterwards.
94	26th September, 1 P.M.	North Anantapur Mine, Morrison P. O., Madras.	North Anantapur Mines, Ltd.	Guntumathi Narappa, (m.), 25, Siruval Subbrayadu, (m.), 28, Hand jumper coolies.	Gold .	Deceased were drilling a hole in a stope and drilled into either a miss-fired shot or a socket containing blasting gelatine which exploded. Guntumathi Narappa was killed outright and Siruval Subbrayadu died from shock five days later. Inquiry made.

95	19th October, 4 P.M.	Gladstone Mine, Mohulia P. O., Bengal.	Cape Copper Co., Ld.	Raggie, (m.), 22, <i>Shot-firer.</i>	Copper	Deceased fired a round of seven shots in a heading; one went off long before the others and afterwards deceased was found lying by the side of the heading 60 feet from the shots with his left hip blown in. He was semi-conscious but died in about an hour. He had been injured by the first shot. There was evidence that he afterwards crawled to where he was found. Inspection and inquiry made.
96	12th November, 4-30 P.M.	Jonawani Mine, Ramtek P. O., Central Provinces.	Central India Mining Co., Ld.	Bala, (m.), 25, <i>Mining coolie.</i>	Manganese	While deceased and another miner were tamping a shot hole, it suddenly exploded injuring both of them. Deceased died from his injuries the following day.
IRRUPTIONS OF WATER OR FALLING INTO WATER—(1 death).						
97	24th May, 3 P.M.	Rocklands Mine, Podulkur P. O., Madras.	R. V. Venkata Subbiah Iyer.	Badugu Chinna Polu, (f.), 10, <i>Mica kamin.</i>	Mica	Deceased was found drowned in 12 feet of water in a quarry, which was temporarily closed, when all the other coolies had gone to a neighbouring mine to be paid. It is surmised she went to drink and fell in and was drowned. Inspection and inquiry made.
HAULAGE—(19 deaths).						
98	12th January, 10 P.M.	New Tetturia Mine, Katragarh P. O., Bengal.	New Totturia Coal Co., Ld.	Fujdar Numia, (m.), 30, <i>Tub-checker.</i>	Coal	While walking up an incline deceased was overtaken and run over by a train of tubs, which was being hauled from the workings. Inspection and inquiry made.
99	13th January, 2-15 P.M.	South Kustore Mine, Kustore P. O., Bengal.	Raniganj Coal Association, Ld.	Gangaram Gonesh Chamar, (m.), 28, <i>Coal-cutter.</i>	Coal	Deceased was killed by a train of tubs, which ran wild from the surface, owing to the carelessness of the hookman. Inspection and inquiry made.
100	17th February, 2 P.M.	East Nudkburki Mine, Nowagarh P. O., Bengal.	Auckland Coal Co., Ld.	Joti Rowani, (m.), 28, <i>Banksman.</i>	Coal	Twenty empty tubs were standing on the brow of an incline, with the leading tub spragged. Deceased took out the sprag, gave an order for the tubs to be started and then proceeded down the incline to open the dropgate. Unfortunately the three leading tubs were not coupled to the rest and they ran wild, crushing deceased against the gate. He died next day. Inspection and inquiry made. <i>See Report, page 22.</i>
101	7th March, 4 P.M.	Dhundabad Mine, Sitarampur P. O., Bengal.	New Manbhum Coal Co., Ld.	Niria Kole, (f.), 22, <i>Coal-carrier.</i>	Coal	Deceased was travelling up a road rising 1 in 13 without a light, while a loaded tub, under the control of two men, was descending. Before she could make good her escape the tub crushed her against the side of the road, where the width narrows down at a dyke from 9' to 4½'. She died almost immediately. Inspection and inquiry made.
102	5th April, 3 A.M.	Dandot Mine, Dandot P. O., Panjab.	North-Western Railway	Saif, (m.), 24, <i>Miner.</i>	Coal	As four empty tubs were about to be lowered down an incline, the last tub but one became derailed. An attempt to replace it on the rails resulted in the hook between it and the two front tubs coming out. These two tubs ran wild and caught deceased at a distance of 200 feet down the incline. He died in a few hours.
103	6th April, 4-30 P.M.	Borrea Mine, Sitarampur P. O., Bengal.	New Beerbhum Coal Co., Ld.	Mangal Manjhi, (m.), 15, <i>Coal-trammer.</i>	Coal	A loaded tub crushed out a piece of coal, that had been placed by deceased beneath one of its wheels to hold it on a grade of 1 in 12, and ran wild. He was tramping another tub in front of it and was crushed between the tubs. He died shortly afterwards. Inspection and inquiry made.
104	8th April, 6-30 P.M.	Khost Mine, Khost P. O., Baluchistan.	North-Western Railway	Ram Lal, (m.), 34, <i>Chargeman.</i>	Coal	While inspecting the winding dip by riding up on the hook and chains in front of a set of full trams, deceased appears to have lost his balance at a change of slope and fallen off, and was killed by being crushed between the trams and the side of the road.

APPENDIX II—contd.

Fatal Accidents, 1911—contd.

Serial number.	Date and hour of accident.	Name and situation of mine.	Name of owner.	Name, sex, age, and occupation of person killed.	Name of mineral worked.	Cause of accident and remarks.
<b>IN SHAFTS—consolid.</b>						
<b>Miscellaneous—(8 deaths).</b>						
88	30th April, 5-30 A.M.	Loyabad Mine, Bansjora P. O., Bengal.	Barakar Coal Co., Ltd.	Mohar Chamar, (m.), 30, Coal-cutter.	Coal .	Owing to a mistake by the surface hookman the cage was raised from the bottom, whilst men were lifting a derailed tub in the cage. The tub fell out upon the men and deceased was so severely injured that he died twelve days afterwards. Inspection and inquiry made.
89	18th May, 12 A.M.	Gladstone Mine, Mohulia P. O., Bengal.	Cape Copper Co., Ltd.	Satrugnan, (m.), 26, Underground coolie.	Copper .	Deceased was seated on the skip filling it. While thus engaged, the signal to hoist was given by some unauthorized person and he was crushed between the skip and the hanging wall and killed. Inspection and inquiry made.
90	29th October, 5 P.M.	Ballarpur Mine, Ballarpur P. O., Central Provinces.	Government of India	Durjan Zuri, (m.), 45, Coolie.	Coal .	Deceased was on a temporary scaffold under one of the cages at the top of a shaft, fixing a guide block, when the cage descended from a height of 3 feet and crushed him so severely that he died six days afterwards. The winding engineman stated he received instructions to lower the cages but the evidence of all on the pit top went to disprove this.
<b>SUFFOCATION BY GASES—(2 deaths).</b>						
91	10th December, 8 A.M.	Tikak Mine, Margherita P. O., Assam.	Assam Railways and Trading Co., Ltd.	Bahadur Kora, (m.), 43, Sirdar. Mohadew Bauri, (m.), 35, Brick mistri.	Coal .	Whilst engaged in plastering a fire dam, deceased were overcome by a sudden inburst of carbon dioxide, which probably came from old workings through fissures in the coal, and suffocated. Their bodies were recovered that evening. Inspection and inquiry made. <i>See Report, page 21.</i>
<b>BY EXPLOSIVES—(7 deaths).</b>						
92	5th January, 7-15 A.M.	North Anantapur Mine, Morrison P. O., Madras.	North Anantapur Gold Mines, Ltd.	Nichiyil Naidu, (m.), 25, Valan, (m.), 30, Coolies.	Gold .	The blaster had fired seven shots. He noticed that a socket was left where one of the shot holes had been and put a stone over it, warning the workmen not to touch it. Nichiyil Naidu put a jumper into the hole in which some explosive remained. It went off, killing him instantaneously and injuring Valan so severely that he died on the following day. Inspection and inquiry made.
93	20th July, 4-40 P.M.	Pagaye Mine, Tavoy P. O., Burma.	Rangoon Mining Co., Ltd.	Law Se, (m.), 34, Miner.	Wolframite .	Three shot holes in an adit had been charged and the charges lit. Deceased imagined all three charges had gone off and entered the adit. He was knocked over by the third charge which went off at that moment. He died from the injuries received thirteen days afterwards.
94	26th September, 1 P.M.	North Anantapur Mine, Morrison P. O., Madras.	North Anantapur Gold Mines, Ltd.	Guntumathi Narappa, (m.), 25, Siruval Subbrayadu, (m.), 28, Hand jumper coolies.	Gold .	Deceased were drilling a hole in a stope and drilled into either a miss-fired shot or a socket containing blasting gelatine which exploded. Guntumathi Narappa was killed outright and Siruval Subbrayadu died from shock five days later. Inquiry made.



95	19th October, 4 P.M.	Gladstone Mine, Mohulia P. O., Bengal.	Cape Copper Co., Ld.	Raggie, (m.), 22, <i>Shot-firer.</i>	Copper	Deceased fired a round of seven shots in a heading; one went off long before the others and afterwards deceased was found lying by the side of the heading 60 feet from the shots with his left hip blown in. He was semi-conscious but died in about an hour. He had been injured by the first shot. There was evidence that he afterwards crawled to where he was found. Inspection and inquiry made.
96	12th November, 4-30 P.M.	Junawani Mine, Ramtek P. O., Central Provinces.	Central India Mining Co., Ld.	Bala, (m.), 25, <i>Mining coolie.</i>	Manganese	While deceased and another miner were tamping a shot hole, it suddenly exploded injuring both of them. Deceased died from his injuries the following day.
<b>IRRUPTIONS OF WATER OR FALLING INTO WATER—(1 death).</b>						
97	24th May, 3 P.M.	Rocklands Mine, Podulkur P. O., Madras.	R. V. Venkata Subbiah Iyer.	Badugu Chinna Polu, (f.), 10, <i>Mica kamin.</i>	Mica	Deceased was found drowned in 12 feet of water in a quarry, which was temporarily closed, when all the other coolies had gone to a neighbouring mine to be paid. It is surmised she went to drink and fell in and was drowned. Inspection and inquiry made.
<b>HAULAGE—(19 deaths).</b>						
98	12th January, 10 P.M.	New Tetturia Mine, Katrasgarh P. O., Bengal.	New Tetturia Coal Co., Ld.	Fujdar Namia, (m.), 30, <i>Tub-checker.</i>	Coal	While walking up an incline deceased was overtaken and run over by a train of tubs, which was being hauled from the workings. Inspection and inquiry made.
99	13th January, 2-15 P.M.	South Kustore Mine, Kustore P. O., Bengal.	Raniganj Coal Association, Ld.	Gangaram Gonesh Chamar, (m.), 28, <i>Coal-cutter.</i>	Coal	Deceased was killed by a train of tubs, which ran wild from the surface, owing to the carelessness of the hookman. Inspection and inquiry made.
100	17th February, 2 P.M.	East Nudkburki Mine, Nowagarh P. O., Bengal.	Auckland Coal Co., Ld.	Joti Rowani, (m.), 28, <i>Banksman.</i>	Coal	Twenty empty tubs were standing on the brow of an incline, with the leading tub spragged. Deceased took out the sprag, gave an order for the tubs to be started and then proceeded down the incline to open the droppgate. Unfortunately the three leading tubs were not coupled to the rest and they ran wild, crushing deceased against the gate. He died next day. Inspection and inquiry made. <i>See Report, page 23.</i>
101	7th March, 4 P.M.	Dhundabad Mine, Sitarampur P. O., Bengal.	New Manbhum Coal Co., Ld.	Niria Kole, (f.), 22, <i>Coal-carrier.</i>	Coal	Deceased was travelling up a road rising 1 in 13 without a light, while a loaded tub, under the control of two men, was descending. Before she could make good her escape the tub crushed her against the side of the road, where the width narrows down at a dyke from 9' to 4½'. She died almost immediately. Inspection and inquiry made.
102	5th April, 3 A.M.	Dandot Mine, Dandot P. O., Panjab.	North-Western Railway	Saif, (m.), 24, <i>Miner.</i>	Coal	As four empty tubs were about to be lowered down an incline, the last tub but one became derailed. An attempt to replace it on the rails resulted in the hook between it and the two front tubs coming out. These two tubs ran wild and caught deceased at a distance of 200 feet down the incline. He died in a few hours.
103	6th April, 4-30 P.M.	Borrea Mine, Sitarampur P. O., Bengal.	New Beerbhum Coal Co., Ld.	Mangal Manjhi, (m.), 15, <i>Coal-trammer.</i>	Coal	A loaded tub crushed out a piece of coal, that had been placed by deceased beneath one of its wheels to hold it on a grade of 1 in 12, and ran wild. He was tramping another tub in front of it and was crushed between the tubs. He died shortly afterwards. Inspection and inquiry made.
104	8th April, 6-30 P.M.	Khost Mine, Khost P. O., Baluchistan.	North-Western Railway	Ram Lal, (m.), 34, <i>Chargeman.</i>	Coal	While inspecting the winding dip by riding up on the hook and chains in front of a set of full trams, deceased appears to have lost his balance at a change of slope and fallen off, and was killed by being crushed between the trams and the side of the road.

APPENDIX II—contd.

Fatal Accidents, 1911—contd.

Serial number.	Date and hour of accident.	Name and situation of mine.	Name of owner.	Name, sex, age, and occupation of person killed.	Name of mineral worked.	Cause of accident and remarks.
<b>HAULAGE—contd.</b>						
105	15th April, 7-30 P.M.	Bhowra Mine, Jamadoba P. O., Bengal.	Eastern Coal Co., Ld.	Fagu Koiri, (m.), 40, <i>Hookman.</i>	Coal	Deceased was removing a sprag from the wheel of a tub and was caught between this tub and a train of six tubs which was slowly moving to a standstill. He sustained internal injuries from which he died eight hours later. Inspection and inquiry made.
106	28th April, 2 A.M.	Katras Mine, Katrasgarh P. O., Bengal.	Nowagarh Coal Co., Ld.	Juman Meah, (m.), 55, <i>Tub-pusher.</i>	Coal	Deceased was pushing an empty tub up a slope on the surface, when a loaded tub was allowed to run uncontrolled from the siding. A collision occurred and he was knocked down, receiving injuries from which he died fourteen hours later. Inspection and inquiry made.
107	13th May, 6-30 A.M.	Kondwadih Mine, Kusunda P. O., Bengal.	East Indian Coal Co., Ld.	Bisun Singh, (m.), 30, <i>Peon.</i>	Coal	Deceased was found dead beneath a train of derailed coal tubs, on which it is probable he had been riding, against general orders. Inspection and inquiry made.
108	3rd June, 6 P.M.	Khas Jharia Mine, Jharia P. O., Bengal.	Khas Jharia Coal Co.	Dasarath Singh, (m.), 30, <i>Underground hookman.</i>	Coal	Owing to the breakage of a rope capping, five loaded tubs ran wild on a dip haulage road. Deceased was run over and killed on the spot. Inspection and inquiry made. <i>See Report, page 22.</i>
109	20th June, 3 P.M.	Jamadoba Mine, Jamadoba P. O., Bengal.	Indian Collieries Syndi- cate, Ld.	Bishu Musahar, (m.), 27, <i>Bottom hookman.</i>	Coal	A derailment occurred on a road dipping 1 in 9 and worked by endless haulage. Whilst the derailed tub was being lifted on to the rails, the haulage was restarted, owing to the giving of an unauthorised signal by some person unknown. Another tub bumped up against the derailed tub and the impact caused its clip to open and release the tub which ran wild. Deceased was knocked down and killed by the runaway tub at a point 200 feet further down the slope. Inspection and inquiry made.
110	4th July, 10-30 P.M.	Bhowra Mine, Jamadoba P. O., Bengal.	Eastern Coal Co., Ld.	Kartik Singh, (m.), 40, <i>Hookman.</i>	Coal	Deceased was knocked down by a train of tubs which ran wild owing to the breakage of a drawbar. He died from injuries received eighteen hours later. Inspection and inquiry made.
111	21st July, 12 noon.	Kodar Mine, Chipurupalli P. O., Madras.	Vizianagram Mining Co., Ld.	Kanama, (f.), 15, <i>Coolie.</i>	Manganese	A set of six loaded tubs had been drawn up an incline and <del>the</del> <i>the</i> <del>con</del> <i>con</i> been undone. Owing to the carelessness of the incline attendant in not pulling over safety stops, a loaded tub ran down the incline and jumping the buffer stop at the bottom fell about 100 feet away. Deceased was either struck by the tub or died of shock brought on by fright. The doctor said he examined her but could find no marks. Inspection and inquiry made. <i>See Report, page 23.</i>

112	4th August, 7-30 P.M.	Raniganj Mine, Raniganj P. O., Bengal.	Bengal Coal Co., Ltd.	Umesh Bauri, (m.), 18, <i>Underground trammer.</i>	Coal .	Deceased was pushing a loaded tub, which was spragged, down an inclined plane, when he was run into from behind by another tub and had one of his legs caught between the buffers and broken. Evidence is not clear as to whether the other tub ran wild from the top of the incline or was pushed by another trammer. There was no stop-block at the top of the inclined plane. He died two days later. Inspection and inquiry made.
113	31st August, 9-20 P.M.	Lakorka Mine, Katrasgarh P. O., Bengal.	Lakorka Coal Co., Ltd.	Bhudeb Charan Mukherji, (m.), 27, <i>Pit sircar.</i>	Coal .	Whilst a train of 15 tubs was being started from the top of the haulage slope, a coupling hook fell off and four tubs ran wild. Deceased, who had just entered the arching on his way underground, was knocked down and sustained injuries from which he died within two hours. Inspection and inquiry made. <i>See Report, page 23.</i>
114	7th October, 8-30 A.M.	Chowrasi Mine, Disbargarh P. O., Bengal.	Equitable Coal Co., Ltd.	Budhu Manjhi, (m.), 25, <i>Coal-cutter.</i>	Coal .	Deceased was killed by a train of five tubs which, owing to a missed coupling, ran wild from the top of a haulage slope. The hookman responsible for the coupling together of the tubs absconded immediately. Inspection and inquiry made.
115	15th October, 2-30 A.M.	Panohatchia Mine, Sitarampur P. O., Bengal.	Lutchipur Coal Co., Ltd.	Chamari Gwala, (m.), 50, <i>Hookman.</i>	Coal .	Whilst a train of five empty tubs was being lowered on a haulage incline, the front tub became uncoupled and ran wild to the bottom, where deceased was run over and received injuries from which he died five hours later. Inspection and inquiry made. <i>See Report, page 23.</i>
116	27th October, 6-15 P.M.	Sendra Mine, Bansjora P. O., Bengal.	Sendra Coal Co., Ltd.	Amrit Chamar, (m.), 37, <i>Underground hookman.</i>	Coal .	Owing to excess of slack rope being paid out, a train of seven empty tubs ran wild for a distance of some 50 feet down a grade of 1 in 4.3. The jerk thus caused broke the rope. The released train ran into the mine. Deceased was run over and killed 200 feet further down the slope. The banksman had tied up the wire actuating the emergency stop-block and was directly responsible for the fatality. He absconded immediately. Inspection and inquiry made.
<b>SUNDRIES UNDERGROUND—(5 deaths).</b>						
117	23rd February, 4-0 A.M.	North Anantapur Mine, Morriston P. O., Madras.	North Anantapur Mines, Ltd.	Chemes Pillai, (m.), 20, <i>Hand jumper coolie.</i>	Gold .	Deceased and three other men were engaged in driving a rise to connect with a winze, working on a wooden staging 15 feet from the ground. One of the timbers supporting the staging broke, it is surmised, by ground falling on top of it, and the staging was thrown to the ground and deceased died from injuries thus received. Inspection and inquiry made.
118	6th April, 1 P.M.	Mayo Mine, Khewra P. O., Panjab.	Govt. of India	Rakhi, (f.), 45, <i>Carrier.</i>	Salt .	Deceased was on her way out of the mine and had allowed her light to go out. In order to get to the travelling way she had to cross the tram line, and, as she was doing so, she was knocked down by a salt truck which was coming out. She died that night.
119	15th July, 0-20 A.M.	Dhundabad Mine, Sitarampur P. O., Bengal.	New Manbhurn Coal Co., Ltd.	Hira Manjhain, (f.), 23, <i>Coal-carrier.</i>	Coal .	An air blast produced by an extensive fall of roof dislodged a rail, 11' 6" long and weighing 52 lbs., which was supporting the shaft bottom protection sheets and hurled it a distance of 32 feet. In its flight it struck the deceased on the head and killed her outright. Inspection and inquiry made. <i>See Report, page 23.</i>
120	1st December, 8 A.M.	Kurkend Mine, Kusunda P. O., Bengal.	Central Kurkend Coal Co., Ltd.	Dassia Turin, (f.), 17, <i>Coal-carrier.</i>	Coal .	Whilst carrying a heavy basket full of coal, deceased tripped and fell on a tram line. She sustained an injury to the spine and died a few hours later. Inspection and inquiry made.
121	5th December, 7 A.M.	Ranidih Mine, Mohoda P. O., Bengal.	East Indian Mining Syndicate.	Sukri Kahar, (f.), 13, <i>Coolie.</i>	Coal .	With the object of killing vermin deceased, when underground, poured kerosene oil from a lighted lamp on her head. Her hair caught fire and she was so severely burnt that she died on the following day. Inspection and inquiry made.

APPENDIX II—contd.

Fatal Accidents, 1911—contd.

Serial number.	Date and hour of accident.	Name and situation of mine.	Name of owner.	Name, sex, age and occupation of person killed.	Name of mineral worked.	Cause of accident and remarks.
<b>ABOVE GROUND.</b>						
<b>By surface machinery—(3 deaths).</b>						
122	20th April, 9-50 A.M.	Sanctoria Mine, Dishargarh P. O., Bengal.	Bengal Coal Co., Ltd.	Madan Khan, (m.), 62, <i>Engine cleaner.</i>	Coal .	Although warned by the engineman to desist, deceased persisted in continuing to clean the engine after it had been started. He was caught by the indicator crank and jammed in the engine, being killed instantaneously. Inspection and inquiry made.
123	8th June, 8 A.M.	Jamadoba Mine, Jamadoba P. O., Bengal.	Indian Collieries Syndicate, Ltd.	Hari Meah, (m.), 25, <i>Tub-runner.</i>	Coal .	Deceased was one of a number of men who were attempting to reverse the direction of travel of an endless haulage rope by pulling at the fly wheel of the engine. Steam was shut off at the time. After turning the fly wheel about half way round the weight of the tubs on the rope caused it to return with a jerk to its original position. Deceased was thrown into the gearing and received injuries from which he died two days later. Inspection and inquiry made.
124	21st June, 8-30 A.M.	Blagaband Mine, Jharia P. O., Bengal.	Borrea Coal Co., Ltd.	Deo Narayan Lal, (m.), 24, <i>Tub-checker.</i>	Coal .	Whilst sheltering from rain in a surface hauling engine house, deceased's clothes were caught in the gearing and he was dragged in between the spur wheel and pinion. Killed instantaneously. Inspection and inquiry made.
<b>On surface railways and tramways belonging to the mine—(7 deaths).</b>						
125	1st February, 8-30 P.M.	Bhuskajuri Mine, Asansol P. O., Bengal.	Bhuskajuri Coal Co., Ltd.	Jugal Bhuia, (m.), 14, <i>Tramming coolie.</i>	Coal .	A loaded tub was being emptied by deceased on a trestle tramway, 9 feet high, when another tub collided with it, with the result that deceased was pitched on to the ground below and, alighting on his head, sustained compression of the brain. He died seven days later. Inspection and inquiry made.
126	9th February, 1 P.M.	Craddock Mine, Pench Valley P. O., Central Provinces.	Central Pench Valley Coal Co., Ltd.	Rangu Gond, (m.), 45, <i>Coolie.</i>	Coal .	Deceased was riding, without orders, on a tub frame, down a slight gradient, and collided with a tub loaded with rails and sleepers, his head striking the end of a rail on the loaded tub. He was killed instantly.
127	16th March, 7 P.M.	Kochkurie Mine, Ramtek P. O., Central Provinces.	Bansil Ambirchand Mining Syndicate.	Govind Ram, (m.), 45, <i>Cashier.</i>	Manganese .	Deceased was trolleying at dusk on the tram line and the trolley he was on ran into or was run into by four empty ore tubs coming the other way. He had one of his legs cut off and died about two hours afterwards from shock. Inspection and inquiry made. <i>See Report, page 24.</i>
128	31st July, 7-30 A.M.	Tikak Mine, Margherita P. O., Assam.	Assam Railways and Trading Co., Ltd.	Bodri Gwala, (m.), 40, <i>Sweeper.</i>	Coal .	Whilst travelling down the incline on the surface, deceased, who was partly blind, deaf, and of unsound mind, was run over and killed by a train of coal tubs. Inspection and inquiry made.

129	3rd September, 10 A.M.	Kodur Mine, Chipurupalli P. O., Madras.	Vizianagram Mining Co., Ld.	Lenka Bungari, (m.), 50, <i>Coolie.</i>	Manganese	The coupling between the second and last tubs of a set of three unhooked and the front two tubs went on ahead. Deceased had one foot on the second tub and one on the last one and when they parted he fell between them and was run over. One of his ankles was badly crushed. The foot was amputated the next day, but he died after the operation. Inspection and inquiry made.
130	8th November, 2-30 A.M.	Bagdigi Mine, Jharia P. O., Bengal.	C. J. Smith . . . .	Jhari Mahato, (m.), 22, <i>Surface-trammer.</i>	Coal	Deceased was sleeping about 3 feet away from a tram line on the surface, at night, when a loaded tub derailed and fell upon him killing him on the spot. Inspection and inquiry made.
131	21st November, 9-15 A.M.	Khost Mine, Khost P. O., Baluchistan.	North-Western Railway	Mahomed Aswar, (m.), 18, <i>Fireman.</i>	Coal	As deceased was walking a few feet in front of a colliery locomotive sprinkling dust on the lines because they were slippery, he slipped and fell, and the locomotive passed over him. He died in a few minutes.
Miscellaneous on surface—(6 deaths.)						
132	14th January, 9 P.M.	Khuldiha Mine, Giridih P. O., Bengal.	Bengal Coal Co., Ld.	Gondo Gope, (m.), 40, <i>Winding engine khalassi.</i>	Coal	Deceased's body was found in a boiler feed water tank. His clothes were on the edge and it is presumed that he fell in while washing himself. The tank was fenced by a single wire. Inspection and inquiry made.
133	15th January, 6 A.M.	Bhuggudih Mine, Dhanbaid P. O., Bengal.	Bengal-Nagpur Coal Co., Ld.	Bisna Burhi, (m.), 20, <i>Depôt coolie.</i>	Coal	Deceased was found dead floating in a boiler feed water tank, 12' 0" x 8' 6", which had 7 feet of water in it. He had probably climbed over the fence surrounding it on the previous (Sunday) evening to bathe. Inspection and inquiry made.
134	17th January, 3 P.M.	Hiria Mine, Kodarma P. O., Bengal.	S. K. and K. K. Sahana .	Bhatu Meah, (m.), 18, <i>Splitter.</i>	Mica	Deceased and three other men had made a hole in a mica waste heap about 5 feet deep. The side collapsed and buried them. The three others were rescued alive, but deceased died from suffocation.
135	1st May, 9 P.M.	Kurkend Mine, Kusunda P. O., Bengal.	Central Kurkend Coal Co., Ld.	Obad Bawrin, (f.), 40, <i>Coal-carrier.</i>	Coal	Deceased was filling her lighted lamp with kerosine oil from a bottle, when the bottle caught fire. The fire spread to her clothes and she was badly burnt, dying two days afterwards. Inspection and inquiry made.
136	6th July, 8-30 A.M.	South Kujama Mine, Jharia P. O., Bengal.	Bagdiggi-Kujama Col- lieries Co., Ld.	Punit Bhua, (m.), 55, <i>Surface labourer.</i>	Coal	Deceased was struck on the neck by a falling ladder, and expired six hours later. Inspection and inquiry made.
137	1st December, 4-30 P.M.	Kabulgitti Mine, Kabulgitti P. O., Bombay.	Kabulgitti Gold Mines	Beldhadi Sankia, (m.), 30, <i>Coolie.</i>	Gold	As the timber boomstay beam of a head gear was being lowered, a snatch block broke, and the beam swung round and fell, knocking down deceased who was running away at the time. He died seventeen hours afterwards.

APPENDIX II—contd.

Fatal Accidents, 1911—contd.

Serial number.	Date and hour of accident.	Name and situation of mine.	Name of owner.	Name, sex, age, and occupation of person killed.	Name of mineral worked.	Reason for exclusion.	Cause of accident and remarks.
<b>DEATHS NOT INCLUDED IN THE STATISTICS—(23 deaths).</b>							
1	6th January, 3-45 P.M.	Pathargada Mine, Bhujudih P. O., Bengal	Kohinoor Coal Co., Ltd.	Ramgutti Kurmin, (f.), 4.	Coal	Not employed	Deceased was alone in a hut, which caught fire, and was burned to death. Inspection and inquiry made.
2	19th January, 9 A.M.	Vanora Khas Mine, Charanpur P. O., Bengal.	Maharaja M. C. Nandi	Paloon Koiri, (m.), 3.	Coal	Not employed	While loaded tubs were being shunted on a surface tram line, situated within 20 feet of some dwellings, the deceased strayed upon the line and was run over. Inspection and inquiry made.
3	28th January, 4 P.M.	Jotejanaki Mine, Chowkidanga P. O., Bengal.	Banerji Santan	Nanda Bauri, (m.), 55, Colliery contractor's thatcher.	Coal	Not employed at mine.	Deceased, with another man, was crossing a bridge over which trams run, from the pit. They had been engaged in thatching some coolies' huts and were returning from work. While on the bridge, thinking they heard a tram coming, they ran, and deceased tripped and fell over the end of the bridge into the jore below and broke one of his legs just above the ankle. He died a month later. Inspection and inquiry made.
4	3rd February, 1-55 A.M.	Tumsar Road Tramway, Bhandara P. O., Central Provinces.	Central India Mining Co., Ltd.	Haria Chamar, (m.), 22, Tub cleaner.	Manganese	Not a mine tramway.	Deceased was sleeping near a coal fire on a surface railway. His clothes caught fire and he was burnt so severely that he died three days later.
5	1st March, 10 A.M.	Shivrajpur Mine, Shivrajpur P. O., Bombay.	Shivrajpur Syndicate, Ltd.	Sunder Rama, (f.), 1½.	Manganese	Not employed	The deceased child crawled away unnoticed from the place where she was put down by her mother and which was about 25 yards off and went to sleep with her right arm and leg over the rail. A full tub pushed by the father and uncle of deceased ran over her and she had her arm and leg cut off dying from shock ten days after. Inspection and inquiry made.
6	18th March, 6 A.M.	Kenda <sup>2</sup> Mine, Chowkidanga P. O., Bengal.	Fulchand Marwari	Mukhu Majhain, (f.), 17, Underground loading kamin.	Coal	Suicide	Deceased had been off work for 3 or 4 days complaining of feeling ill in her head. She went out of her house when her husband went to the bazar and threw herself into a pit. She was seen and pulled out, but died. Inspection and inquiry made.
7	19th March, Unknown.	Jamuria Mine, Nandi P. O., Bengal.	Equitable Coal Co., Ltd.	Fagu Manjhi, (m.), 48.	Coal	Not employed	Deceased was found drowned in a boiler feed water tank, 40 feet square and 12 feet high. There was 6 feet of water in the tank, which was properly fenced. It is presumed he fell in in a fit. Inspection and inquiry made.
8	19th March, 10 A.M.	Borrea Mine, Sitarampur P. O., Bengal.	New Beerbhun Coal Co., Ltd.	Okhoy Gope, (m.), 4½.	Coal	Not employed	According to the evidence of his nephew, deceased had been mad for about a year. He ran out of the house and, when running past an abandoned pit, 35 feet deep, which was unfenced, he fell into it. Whether by accident or design is unknown. He was dead when got out. Inspection and inquiry made. See Report, page 24.

9	27th March, 5 A.M.	Salanpur Mine, Sitarampur P. O., Bengal.	Borrea Coal Co., Ld.	Piari Marwarin, (f.), 30.	Coal	Not employed	Deceased, while suffering great pain, deliberately climbed the protection wall of an old shaft and jumped into about 60 feet of water. Her body was recovered three days later. Inspection and inquiry made.
10	16th April, 7-30 P.M.	Kendwadih Mine, Kusunda P. O., Bengal.	East Indian Coal Co., Ld.	Bhogia Dosadhin, (f.), 30.	Coal	Not a mine accident.	Deceased died from burns received while endeavouring to rescue property from a burning hut. Inspection and inquiry made.
11	—May,	Jairamdanga Mine, Asansol P. O., Bengal.	New Beerbhum Coal Co., Ld.	Unknown, (f.), 45.	Coal	Not employed.	Deceased was found at the bottom of No. 6 pit, which is disused. She had quarrelled with her son and it was presumed afterwards committed suicide by throwing herself down the shaft. The shaft was well fenced. Inspection and inquiry made.
12	5th June, 8 A.M.	Kujama Mine, Jharia P. O., Bengal.	L. H. Dass & Co.	Dadia Nuth, (m.), 33, <i>Pump khalassi.</i>	Coal	Not a mine accident.	Deceased was lowered in a basket by a rope to the bottom of an old well, 71 feet deep, for the purpose of examining it. After remaining a few moments he was hauled up again, but fell from the rope when he had been drawn about half way up. He was rescued, but died shortly afterwards from injuries due to the fall. Two days later a lamp was extinguished when lowered to a depth of 26 feet. From this it is evident that deceased was overcome by breathing air containing an excess of carbonic acid gas. Inspection and inquiry made.
13	22nd June, 8 P.M.	Kujama Mine, Jharia P. O., Bengal.	G. K. Dosa & Co.	Bhagbania Bhunia, (f.), 4.	Coal	Not employed	Deceased was blind and partly deaf, and, falling into a small stream near the coolie lines, she was drowned. Inspection and inquiry made.
14	4th July, 6 A.M.	Egarcoor Mine, Chirkunda P. O., Bengal.	Umed Bhai Patel	Radha Merchi, (m.), 1	Coal	Not employed	Following the extraction of pillars under a thin cover, about 1,600 square feet of surface, upon which a hut was standing, subsided to a depth of 7 feet and reduced the hut to ruins. Seven persons were extricated from the ruins, one of whom, a child, aged 1 year, was dead. Two others were injured. Inspection and inquiry made. <i>See Report, page 24.</i>
15	6th July, Unknown.	Katras Mine, Katrasgarh P. O., Bengal.	Nowagarh Coal Co., Ld.	Guyaram Dhobi, (m.), 36.	Coal	Dhobie	Whilst in a state of intoxication, he fell into an old shaft fenced by a wall only 30 inches high. Inspection and inquiry made.
16	19th August, 8 P.M.	Bagdiggi Mine, Jharia P. O., Bengal.	C. J. Smith	Rogunath Kahar, (m.), 26, <i>Domestic servant.</i>	Coal	Not employed on the mine. Suicide.	Deceased had committed a theft and, whilst attempting to evade pursuit, jumped into an old quarry and was drowned. Inspection and inquiry made.
17	21st August, 12 Noon.	Kusunda Mine, Kusunda P. O., Bengal.	Kusunda and Nayadi Collieries, Ld.	Bidhu Muchin, (f.), 20.	Coal	Not employed	Deceased was found drowned in a boiler feed water tank which was properly fenced. Inspection and inquiry made.
18	5th September, 12-30 P.M.	Sanctoria Mine, Dishargarh P. O., Bengal.	Bengal Coal Co., Ld.	Mungri Dosadhin, (f.); 37.	Coal	Not employed	In the absence of any eye-witnesses deceased fell into a boiler feed water tank containing water 11' 6" deep. It was evident that she had climbed through the protection fence to fetch drinking water. Inspection and inquiry made.
19	6th October, 9 A.M.	Rajhara Mine, Rajhara P. O., Bengal.	Bengal Coal Co., Ld.	Harakmonia Koirin Mahata, (f.), 70.	Coal	Not employed	Deceased was walking along a surface tram line and was run over by the first of six empty tubs which were being pushed by a locomotive towards the pits. She died on the way to the hospital.

APPENDIX II—*concl'd.*

Fatal Accidents, 1911—*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 worked.	Reason for exclusion.	Cause of accident and remarks.
<b>DEATHS NOT INCLUDED IN THE STATISTICS—<i>concl'd.</i></b>							
20	21st October, 11 A.M.	Alkusa Mine, Kustore P. O., Bengal.	Raniganj Coal Association, Ld.	Pattiya Dosani, (f.), 38, Coal-loader.	Coal	Not a mine accident.	Whilst wagons were being hand shunted, deceased attempted to cross the line and was crushed between two wagons, sustaining internal injuries from which she died five hours later. Inspection and inquiry made.
21	28th October, 12-30 P.M.	Benahir Mine, Jharia P. O., Bengal.	Standard Coal Co., Ld.	Gajwa Dosadh, (m.), 5	Coal	Not employed	Deceased was run over by a loaded tub which was allowed to run uncontrolled down a slope. He received injuries from which he died on the following day. Inspection and inquiry made.
22	5th December, 9-15 P.M.	West Gopalichak Mine, Kusunda P. O., Pengal.	Gopalichak Coal Co., Ld.	Bundia Musalmani, (f.), 13, Surface labourer.	Coal	Not a mine accident.	Deceased was drawing water from a well and by some unknown means fell in and was drowned. Inspection and inquiry made.
23	10th December, 12 Noon.	Jamuria Mine, Nandi P. O., Bengal.	Equitable Coal Co., Ld.	Machoea-Singh, (m.), 33, Labourer.	Coal	Not a mine accident.	Deceased with three other men was lifting a double headed-rail 18 ft. long, down from a height of 7'-6", when he slipped and the rail fell and, in falling, hit him on the head, fracturing his skull. He died three days afterwards. Inspection and inquiry made.



**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 1911.**

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.	
			<b>A.—COAL.</b>											
Bengal	Hazaribagh {	Bokaro-Ramgarh . . . . .	25	...	...	...	...	...	...	...	...	...	...	
		Giridih . . . . .	6,899	4	3	1	4	5	4	1	5	69	38	57
		Jharia . . . . .	11	...	...	...	...	...	...	...	...	...	...	...
	Munbhum, Jharia . . . . .	53,438	60	75	6	81	31	20	11	31	2.22	30	1.51	
	„ Rániganj . . . . .	4,729	5	6	...	6	5	3	2	5	1.82	...	1.26	
	Bankura „ . . . . .	66	...	...	...	...	...	...	...	...	...	...	...	
	Birbhum „ . . . . .	21	...	...	...	...	...	...	...	...	...	...	...	
	Burdwan „ . . . . .	83,844	23	25	2	27	33	29	6	35	1.10	17	.79	
	Sonthal Parganas, Raniganj . . . . .	26	...	...	...	...	...	...	...	...	...	...	...	
	„ Rajmahal . . . . .	17	...	...	...	...	...	...	...	...	...	...	...	
Palamanu, Daltonganj . . . . .	662	...	...	...	...	...	...	...	...	...	...	...		
Sambalpur, Hingir-Rampur . . . . .	245	...	...	...	...	...	...	...	...	...	...	...		
	<b>TOTAL</b>	<b>99,983</b>	<b>92</b>	<b>109</b>	<b>9</b>	<b>118</b>	<b>74</b>	<b>56</b>	<b>20</b>	<b>76</b>	<b>1.68</b>	<b>.25</b>	<b>1.18</b>	
Central Provinces	{	Ohhindwara, Pench Valley . . . . .	470	2	1	1	2	...	...	...	...	2.89	8.06	4.25
		Narsinghpur, Mohpani . . . . .	1,087	1	1	...	1	2	2	...	2	1.48	...	.92
		Chanda, Ballarpur . . . . .	735	1	1	...	1	1	1	...	1	1.70	...	1.36
	<b>TOTAL</b>	<b>2,292</b>	<b>4</b>	<b>3</b>	<b>1</b>	<b>4</b>	<b>3</b>	<b>3</b>	<b>...</b>	<b>3</b>	<b>1.87</b>	<b>1.45</b>	<b>1.74</b>	
Panjab	{	Jhelum . . . . .	1,353	4	6	...	6	3	3	...	3	6.87	...	4.48
		Shahpur . . . . .	35	...	...	...	...	...	...	...	...	...	...	...
		Mianwali . . . . .	132	...	...	...	...	...	...	...	...	...	...	...
	<b>TOTAL</b>	<b>1,505</b>	<b>4</b>	<b>6</b>	<b>...</b>	<b>6</b>	<b>3</b>	<b>3</b>	<b>...</b>	<b>3</b>	<b>6.41</b>	<b>...</b>	<b>3.98</b>	
Eastern Bengal and Assam	Lakhimpur . . . . .	1,965	10	12	1	13	5	5	...	5	9.90	1.32	6.61	
Baluchistan	{	Sibi, Khoet . . . . .	837	7	6	1	7	3	2	1	3	11.38	3.22	3.36
		Loralai, Loralai . . . . .	11	...	...	...	...	...	...	...	...	...	...	...
	<b>TOTAL</b>	<b>848</b>	<b>7</b>	<b>6</b>	<b>1</b>	<b>7</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>3</b>	<b>11.21</b>	<b>3.19</b>	<b>3.25</b>	
North-West Province.	Frontier	Hazara . . . . .	5	...	...	...	...	...	...	...	...	...	...	
	<b>GRAND TOTAL (COAL)</b>	<b>106,598</b>	<b>117</b>	<b>136</b>	<b>12</b>	<b>148</b>	<b>88</b>	<b>69</b>	<b>21</b>	<b>90</b>	<b>1.97</b>	<b>.31</b>	<b>1.36</b>	

## 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 1911.

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.
Bengal	Mongiyar . . . . .	307	...	...	...	...	...	...	...	...	...	...	
	Hazaribagh . . . . .	10,109	5	8	1	9	2	8	...	8	1.40	.22	.89
	Gaya . . . . .	1,379	...	...	...	...	...	...	...	...	...	...	...
	TOTAL	11,795	5	8	1	9	2	8	...	8	1.18	.19	.76
Madras	Nellore . . . . .	3,498	1	1	...	1	...	...	...	...	.43	...	.23
	Salem . . . . .	33	...	...	...	...	...	...	...	...	...	...	...
	TOTAL	3,531	1	1	...	1	...	...	...	...	.42	...	.23
Rajputana	Ajmer-Merwara . . . . .	248	...	...	...	...	...	...	...	...	...	...	...
	GRAND TOTAL (MICA)	15,574	6	9	1	10	2	8	...	8	.97	.15	.64
Central Provinces	C.—MANGANESE.												
	Nagpur . . . . .	3,593	2	1	1	2	1	...	1	1	.34	1.42	.55
	Bhandara . . . . .	1,479	...	...	...	...	8	...	8	8	...	...	...
	Balaghat . . . . .	2,463	...	...	...	...	2	1	1	2	...	...	...
	Chhindwara . . . . .	133	...	...	...	...	...	...	...	...	...	...	...
TOTAL	7,668	2	1	1	2	11	1	10	11	.17	.50	.26	
Madras	Vizagapatam . . . . .	2,704	2	1	1	2	...	...	...	...	.47	1.64	.73
Bombay	Panch Mahals . . . . .	1,512	...	...	...	...	1	1	...	1	...	...	...
	GRAND TOTAL (MANGANESE)	11,884	4	2	2	4	12	2	10	12	.22	.66	.33
Central Provinces	D.—LIMESTONE.												
	Jabalpur-Katni . . . . .	3,382	1	1	...	1	...	...	...	...	.50	...	.20
	Hoshiarpur . . . . .	90	...	...	...	...	...	...	...	...	...	...	...
	GRAND TOTAL (LIMESTONE)	3,472	1	1	...	1	...	...	...	...	.49	...	.28
Panjab	E.—SALT.												
	Shahpur . . . . .	54	...	...	...	...	...	...	...	...	...	...	...
	Jhelum . . . . .	777	1	1	...	1	13	13	...	13	1.34	...	1.28
Mianwali . . . . .	59	...	...	...	...	2	...	2	2	...	...	...	

**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 1911.**

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.
<b>F.—GEMS.</b>													
Bihar	Mogok (Rubies, etc.)	1,505	...	...	...	...	2	...	2	2	...	...	...
Madras	Kurnool (Diamonds)	37	...	...	...	...	...	...	...	...	...	...	...
	<b>GRAND TOTAL (GEMS)</b>	<b>1,542</b>	...	...	...	...	<b>2</b>	...	<b>2</b>	<b>2</b>	...	...	...
<b>G.—SLATE.</b>													
Bengal	Monghyr	220	...	...	...	...	...	...	...	...	...	...	...
Punjab	Kangra	431	...	...	...	...	...	...	...	...	...	...	...
	Gurgaon	170	...	...	...	...	...	...	...	...	...	...	...
	<b>TOTAL</b>	<b>601</b>	...	...	...	...	...	...	...	...	...	...	...
	<b>GRAND TOTAL (SLATE)</b>	<b>821</b>	...	...	...	...	...	...	...	...	...	...	...
<b>H.—GOLD.</b>													
Bombay	Dharwar	264	1	...	1	1	...	...	...	...	...	3.78	3.78
Madras	Anantapur	1,110	3	5	...	5	2	3	...	3	8.93	...	4.50
	<b>GRAND TOTAL (GOLD)</b>	<b>1,374</b>	<b>4</b>	<b>5</b>	<b>1</b>	<b>6</b>	<b>2</b>	<b>3</b>	...	<b>3</b>	<b>8.93</b>	<b>1.22</b>	<b>4.36</b>
<b>I.—IRON.</b>													
Central Provinces	Jabalpur	40	...	...	...	...	...	...	...	...	...	...	...
Bengal	Singhbhum	1,328	...	...	...	...	...	...	...	...	...	...	...
	<b>GRAND TOTAL (IRON)</b>	<b>1,368</b>	...	...	...	...	...	...	...	...	...	...	...
<b>J.—WOLFRAMITE.</b>													
Assam	Tavoy	545	1	1	...	1	...	...	...	...	2.54	...	1.83
	Mergui	...	...	...	...	...	...	...	...	...	...	...	...
	<b>GRAND TOTAL (WOLFRAMITE)</b>	<b>545</b>	<b>1</b>	<b>1</b>	...	<b>1</b>	...	...	...	...	<b>2.54</b>	...	<b>1.83</b>
<b>K.—MAGNESITE.</b>													
Madras	Salem	327	...	...	...	...	...	...	...	...	...	...	...
<b>L.—CHROMITE.</b>													
Punjab	Quetta-Fishin	9	...	...	...	...	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 1911.

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.
			<b>M.—COPPER ORE.</b>										
Bengal . . . . .	Singhbhnm . . . . .	1,323	3	3	...	3	1	4	...	4	381	...	2.91
			<b>N.—FULLER'S EARTH.</b>										
Central Provinces . . . . .	Jabalpur . . . . .	...	...	...	...	...	...	...	...	...	...	...	...
			<b>O.—CLAY.</b>										
Central Provinces . . . . .	Jabalpur . . . . .	101	...	...	...	...	...	...	...	...	...	...	...
			<b>P—GALENA.</b>										
Burma . . . . .	Mandalay . . . . .	8	...	...	...	...	...	...	...	...	...	...	...
Madras . . . . .	Kurnool . . . . .	21	...	...	...	...	...	...	...	...	...	...	...
	<b>GRAND TOTAL (GALENA) .</b>	<b>29</b>	...	...	...	...	...	...	...	...	...	...	...
			<b>Q.—TIN.</b>										
Bengal . . . . .	Hazaribagh . . . . .	13	...	...	...	...	...	...	...	...	...	...	...
Burma . . . . .	Mergui (Maliwan) . . . . .	60	...	...	...	...	...	...	...	...	...	...	...
	<b>GRAND TOTAL (TIN) .</b>	<b>73</b>	...	...	...	...	...	...	...	...	...	...	...
			<b>R.—STEATITE.</b>										
Central Provinces . . . . .	Jabalpur . . . . .	51	...	...	...	...	...	...	...	...	...	...	...
Madras . . . . .	Kurnool . . . . .	38	...	...	...	...	1	...	1	1	...	...	...
	<b>GRAND TOTAL (STEATITE)</b>	<b>89</b>	...	...	...	...	1	...	1	1	...	...	...
			<b>S.—GRAPHITE.</b>										
Madras . . . . .	Vizagapatam . . . . .	25	...	...	...	...	...	...	...	...	...	...	...
			<b>T.—CORUNDUM.</b>										
Madras . . . . .	Trichinopoly . . . . .	290	...	...	...	...	...	...	...	...	...	...	...
			<b>U.—SAMARSKITE.</b>										
Madras . . . . .	Nellore . . . . .	2	...	...	...	...	...	...	...	...	...	...	...
	<b>GRAND TOTAL (ALL MINERALS).</b>	<b>146,336</b>	<b>137</b>	<b>158</b>	<b>18</b>	<b>174</b>	<b>124</b>	<b>100</b>	<b>36</b>	<b>136</b>	<b>1.68</b>	<b>.30</b>	<b>1.18</b>

## APPENDIX II—c

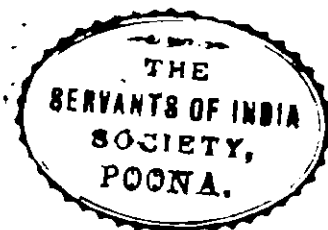


Table No. 3.

Statement of fatal accidents in mines regulated by the Indian Mines Act, 1901, during the year 1911, 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 GROUPS.	
			BELOW GROUPS.				ABOVE GROUPS.					
			Adult males.	Adult females.	Children (under 13).	TOTAL.	Adult males.	Adult females.	Children (under 13).	TOTAL.		
COAL . . . . .	Baluchistan . . . . .	7	6	...	...	6	1	...	...	1	7	
	Bengal . . . . .	Giridih . . . . .	4	3	...	...	3	1	...	...	1	4
		Jharis . . . . .	60	60	16	...	75	5	1	...	6	81
		Raniganj . . . . .	28	23	8	...	31	2	...	...	2	33
	TOTAL (BENGAL) . . . . .	92	86	28	...	109	8	1	...	9	118	
	Central Provinces . . . . .	4	2	1	...	3	1	...	...	1	4	
	Eastern Bengal and Assam . . . . .	10	8	4	...	12	1	...	...	1	13	
Panjab . . . . .	4	6	...	...	6	...	...	...	...	6		
TOTAL COAL . . . . .	117	108	28	...	136	11	1	...	12	148		
MICA . . . . .	Bengal . . . . .	5	4	3	1	8	1	...	...	1	9	
	Madras . . . . .	1	...	...	1	1	...	...	...	...	1	
	TOTAL MICA . . . . .	6	4	3	2	9	1	...	...	1	10	
MANGANESE . . . . .	Central Provinces . . . . .	2	1	...	...	1	1	...	...	1	2	
	Madras . . . . .	2	...	1	...	1	...	1	...	1	2	
	TOTAL MANGANESE . . . . .	4	1	1	...	2	1	1	...	2	4	
LIMESTONE . . . . .	Central Provinces . . . . .	1	1	...	...	1	...	...	...	...	1	
SALT . . . . .	Panjab . . . . .	1	...	1	...	1	...	...	...	...	1	
GOLD . . . . .	Bombay . . . . .	1	...	...	...	...	1	...	...	1	1	
	Madras . . . . .	3	5	...	...	5	...	...	...	...	5	
	TOTAL GOLD . . . . .	4	5	...	...	5	1	...	...	1	6	
WOLFRAMITE . . . . .	Burma . . . . .	1	1	...	...	1	...	...	...	...	1	
COPPER . . . . .	Bengal . . . . .	3	3	...	...	3	...	...	...	...	3	
GRAND TOTAL, ALL MINERALS . . . . .		137	123	33	2	158	14	2	...	16	174	

## APPENDIX II—concl'd.

Table No. 4.

Statement of fatal accidents in mines regulated by the Indian Mines Act, 1901, during the year 1911, 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-dump.	Falls of roof.	Falls of side.	In shafts.	By explosives.	Suffocation by gases.	Irritations of water or falling into water.	Haulage.	Miscellaneous below ground.	Surface.	Total deaths.	Below ground.	Above ground.	Below and above ground.
Coal . . . . .	117	17	50	35	11	...	2	...	18	3	12	148	1·97	·31	1·38
Mica . . . . .	6	...	1	7	...	...	...	1	...	...	1	10	·97	·15	·64
Manganese . . . . .	4	...	...	...	...	1	...	...	1	...	2	4	·22	·66	·33
Limestone . . . . .	1	...	...	1	...	...	...	...	...	...	...	1	·49	...	·28
Salt . . . . .	1	...	...	...	...	...	...	...	...	1	...	1	1·16	...	1·12
Gold . . . . .	4	...	...	...	...	4	...	...	...	1	1	6	8·93	1·22	4·36
Wolframite . . . . .	1	...	...	...	...	1	...	...	...	...	...	1	2·54	...	1·88
Copper . . . . .	3	...	...	...	2	1	...	...	...	...	...	3	3·81	...	2·26
Total 1911 . . . . .	137	17	51	43	13	7	2	1	19	5	16	174	1·68	·30	1·18
Total preceding year.	117	27	52	32	20	8	...	6	16	9	16	186	1·89	·29	1·29
Difference . . . . .	+20	-10	-1	+11	-7	-1	+2	-5	+3	-4	...	-12	-21	+1	-11

## APPENDIX III.

## PROSECUTIONS UNDER THE MINES ACT.

Statement of prosecutions instituted under the Indian Mines Act, 1901,  
during the year 1911.

PROVINCE.	District.	Number of prosecutions.	Number of persons prosecuted.	Number convicted.	Numbers of rules and sections of the Act, contravened.	REMARKS.
Bengal	Manbhum	1	1	1	Section 20, Rules 3 and 7.	
	Do.	1	1	1	Ditto.	
	Do.	1	1	1	Section 20, Rule 7.	
	Do.	1	1	1	Ditto.	
	Burdwan	1	1	1	Section 20, Rule 19.	
	Manbhum	1	1	1	Section 20, Rules 4 (b), 9, 22, and 23 and section 13 (1).	
	Do.	1	1	1	Section 20, Rules 7, 8 and 9.	
	Do.	1	1	1	Ditto.	
	Do.	1	1	withdrawn	Section 20, Rules 8, 19 and 20.	
	Do.	1	1	1	Ditto.	
Central Provinces	Do.	1	1	1	Ditto.	
	Mohpani	1	1	1	Section 20, Rule 17 (b).	Prosecution of workman by manager.

## APPENDIX IV.

## MISCELLANEOUS.

## Statement No. 1.

## List of Inspection Circles.

No. 1 Circle.	No. 2 Circle.	No. 3 Circle.
(a) All mines in the district of Manbhum, which are situated west of a line drawn from Adra Junction at mile 175 of the Bengal Nagpur Railway to Gobindpur at mile 169 on the Grand Trunk Road and continued across the district in each direction, and all mines in the district of Palamau.	(a) All mines in the districts of Burdwan and Bankura to the west of a line drawn from mile 131 on the East Indian Railway main line near Asansol to mile 141 on the Ondal loop near Gaurangdi, and continued across the districts in each direction; and all mines in the district of Manbhum east of a line drawn from Adra Junction at mile 175 on the Bengal-Nagpur Railway to Gobindpur at mile 169 on the Grand Trunk Road, and continued across the districts in each direction, and all mines in the districts of Hazaribagh, Gaya, Monghyr, Darjeeling and Ranchi.	(a) All mines in the districts of Burdwan and Bankura to the east of a line drawn from mile 131 on the East Indian Railway main line near Asansol to mile 141 on the Ondal loop near Gaurangdi, and continued across the districts in each direction, and all mines in the districts of the Sonthal Parganas, Birbhum, Singhbhum and Sambalpur.
(b) All mines in Assam.	(b) All mines in Baluchistan.	(b) All mines in the Presidency of Bombay.
(c) All mines in Burma.	(c) All mines in the United Provinces.	(c) All mines in the Central Provinces.
	(d) All mines in the Panjab.	(d) All mines in the Presidency of Madras.
	(e) All mines in Ajmer-Merwara.	



APPENDIX IV—*contd.*

## MISCELLANEOUS.

## 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.
Turnbull, John . . . . .	155	25th March 1911 .	3511	30th December 1909.
Hines, Gordon Ewart . . . . .	156	15th December 1911 .	3496	30th October 1909.
Lang, George Lawrence . . . . .	157	Ditto.	3503	30th December 1909.
Fidoe, John Walter . . . . .	158	Ditto.	3659	29th June 1910.
Entwistle, George . . . . .	159	Ditto.	3078	8th January 1908.
Bridgett, Harry . . . . .	160	Ditto.	2369	13th May 1904.
Wight, Llewelyn . . . . .	161	Ditto.	3472	4th October 1909.
Loveband, Charles James Glenfield . . . . .	162	Ditto.	2011	26th May 1902.

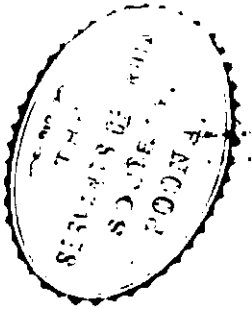
(b) Certificates of competency.

## FIRST CLASS.

NAME.	No. of certificate.	Date of certificate.	REMARKS.
Mitchell, Lionel Patrick . . . . .	57	25th March 1911.	
Cox, Henry Moncrieff . . . . .	58	Ditto.	
Dutt, Aswini Kumar . . . . .	59	Ditto.	

## SECOND CLASS.

Chatterji, Hirendro Nath . . . . .	58	25th March 1911.	
Bhattacharji, Manmatha Nath . . . . .	59	Ditto.	
Mukherji, Mohini Mohan . . . . .	60	Ditto.	
Banerji, Govindra Chandra . . . . .	61	Ditto.	
Guisse, Archibald Henry Charles . . . . .	62	Ditto.	
Power, Clarence Eustus . . . . .	63	Ditto.	

APPENDIX IV—*contd.*

## MISCELLANEOUS.

## Statement No. 3.

List of Universities and Colleges in England and India 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.	28th 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.

APPENDIX IV—*contd.*  
MISCELLANEOUS.



## Statement No. 4.

## SIBPUR COLLEGE.

## THE MINING CLASSES.

## CIRCULAR.

These classes :  
*General explanation*  
in the principles of  
coal or metal mines  
qualify them to a  
Mines Act, VIII of

The course at  
end of the second  
in mining at Sibpur

the attached syllabus and the diploma examination takes place

The classes are open to both regular students and special

*Regular students*—Are those who have qualified for admission into the sub-overseer examination of the Civil Engineering College, or an equivalent test of other colleges.

Their age limits are 17 years minimum and 19 years maximum on admission.

*Special students*.—Persons resident in Bengal, who have been employed upon mines, will be admitted as special students under the following conditions:—

- (a) that they have completed at least two years' practical work upon a mine; and
- (b) that they have passed (i) the B. Final Examination, (ii) the Matriculation or Entrance Examination of any Indian University, or (iii) any test equivalent to the Middle School Examination of the Code for European Schools.

There is no limit of age for such special students.

All applications for admission from outside candidates should be posted so as to reach the Principal's office by 1st April.

Regular students should apply in the proper form available from the Principal's office.

Special students must provide, (a) proof of educational attainments, and (b) a statement showing the nature and extent of their employment upon mines and the period thereof, supported by certificates from the mine managers under whom they have worked.

## SCHOLARSHIPS AWARDED BY THE GOVERNMENT OF BENGAL.

*For regular students*.—Two scholarships of Rs. 12 monthly and three of Rs. 6 are provided. These will be awarded on the results of the sub-overseer examination by the Director of Public Instruction on the recommendation of the Principal. Students trained at the Civil Engineering College or any affiliated technical school in Bengal are eligible for these scholarships. If they are on the Reduced fee list, they will be charged full tuition fees.

*For special students*.—Two scholarships of Rs. 150 monthly for European candidates and two of Rs. 50 monthly for Indian candidates, each tenable for two years, are offered. These will be awarded annually by the Director of Public Instruction on the recommendation of the Mining Advisory Board.

These scholarships are available for candidates who have had at least two years' actual experience of colliery work. They must have passed the Calcutta University Entrance Examination or an equivalent. For Europeans the Middle School Examination of the Code for European Schools or equivalent is accepted.

There is no limit of age.

Application for these scholarships should be made to the Principal of the Civil Engineering College, when applying for admission.

There is no residential accommodation available at the college for special students, scholarship-holders or otherwise: they must make their own arrangement for board and lodging, and must attend the college daily from 8 A. M. A mid-day meal will be supplied if desired at the college at a definite monthly charge to be fixed by the Principal.

## SCHOLARSHIPS AWARDED BY THE GOVERNMENT OF EASTERN BENGAL AND ASSAM.

*For regular students*.—Three of the value of Rs. 15, one being reserved for each of the following classes, namely, European, Muhammadan and Hindu, confined to students domiciled in Eastern Bengal and Assam.

APPENDIX IV—*contd.*

## MISCELLANEOUS.

Statement No. 4—*contd.*

*For special students qualified as above.*—One of Rs. 30 for an European. Two of Rs. 20—one for a Muhammadan and one for a Hindu. The rates for special students are fixed on the understanding that they will reside at the college hostel. If accommodation is not available, Government are prepared to consider an increase. Applications for these scholarships to be made to the Director of Public Instruction of Eastern Bengal and Assam.

The session begins each year on or about the first Monday in May. The college closes for the long vacation about the first week of August and re-opens about the end of October. Special students must pass all college test examinations and must appear at the diploma examination held at the end of the course.

The following fees will be charged from special students:—

*Caution money deposit.*—Rs. 5, which will be returned on leaving the college after deducting any charge-dues owing.

*Tuition fee.*—Rs. 3 monthly payable for 12 months in the year.

*Mid-day meal.*—Rs. 10 monthly for Europeans, and Rs. 5 for Indians.

All fees become due on the 15th of the month.

Regular students, who must be residents, will be charged in full the fees noted in the Rules of the Apprentice Department.

A camp of practical mining and surveying will be held for six weeks in the cold weather of each session in the colliery districts.

## SYLLABUS OF MINING COURSES.

## COURSE I.

*Geology applied to mining.*—(One lecture per week.)

Classification of rocks: characteristic fossils and economic products of the principal systems.

Structure of rock; foldings, faults, cleavage, formation of mineral veins.

Principles of geological surveying: methods employed in constructing geological maps and sections. Special reference to the geology of India.

*Mining Engineering.*—(Two lectures per week.)

Boring by hand and power machines.

Sinking and lining shafts; various methods employed in special cases.

Systems of haulage, underground and aboveground, aerial ropeways.

Hoisting, headgear, ropes, safety appliances.

Mining legislation.

*Section A.*—(One lecture per week.)

Methods of working coal, shafts, pillars, preliminary work, and various methods of working the seams. Special reference to thick coal working as practised in England and different parts of the world.

Shot-firing; coal-cutting by machinery.

Surface subsidence and under-sea working.

Timbering and other supports.

Coal mine plans and sections, connecting surface and underground surveys.

*Section B.*—(One lecture per week.)

Prospecting for and methods of working mineral veins.

Alluvial mining and open workings.

Hydraulic mining; dredging for gold; ore-beds and deep leads, overhand and underhand stopping.

Hand and power drilling; blasting, timbering.

Metal mine plans.

## COURSE II.

*Descriptive Mineralogy.*—(One lecture per week.)

Physical properties of minerals; description of various ores and fuels; methods of determination.

Prospecting operations.

*Mining Engineering.*—(Two lectures per week during first-half of session.)

Drainage of mines; adits, levels; pumping machinery; dams; boring against old workings.

Ventilation of mines; natural and artificial ventilation; splitting and regulating air-currents; types of fans; water-gauge and anemometer.

Power-application in a mine; discussion of relative merits of steam, water, compressed air, electricity and oil, as sources of applied power.

*Section A.*—(One lecture per week.)

Description of gases found in coal mines; colliery explosions; safety lamps; instruments for detecting fire-damp; treatment of men overcome by foul air.

APPENDIX IV—*contd.*

## MISCELLANEOUS.

Statement No. 4—*concl'd.*

Arrangement of surface works at a colliery; sorting and screening coals; coal-washing, briquette making, coking and bye-products.

*Section B.*—(One lecture per week).

Surface works of metal mines, sorting, crushing, sizing, and concentration of various ores. Modern ore-dressing machinery, and slime tables.

Special reference to treatment of gold, silver, copper, lead and zinc.

Cyanide and Chlorine treatment of slimes.

## Statement No. 5.

*The Mining Educational Advisory Board desire that colliery managers will kindly publish this information in their collieries, and use their influence to maintain a regular attendance of the students.*

## MINING INSTRUCTION IN BENGAL.

## RANIGANJ AND JHARIA COAL-FIELDS.

Lectures will be delivered throughout the session at the following centres:—

1. Lecture room near Sijua station on Tuesdays at 6-30 P.M.  
Lecturer—Mr. B. Starks Field.
2. Lecture room near the Jharia Club on Mondays at 5-30 P.M.  
Lecturer—Mr. J. Wilson, B.Sc.
3. Lecture room at Messrs. Apcar and Company's Charanpur Colliery on Fridays at 5-30 P.M.  
Lecturer—Mr. H. C. Read, B.Sc., (BIRM.)
4. Lecture room near Dishargarh Club on Wednesdays at 5-30 P.M.  
Lecturer—Mr. L. A. Jacobs, B.Sc., (DUN.)

The course of instruction, consisting of not less than 25 lectures, will commence the first week in November and end in the following May. At the end of the course an examination will be held, and candidates who pass the examination will receive a certificate recording their success. No candidate will, however, be permitted to sit for examination, unless he has attended 50 per cent. of the lectures.

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

Particulars of the Sibpur College Mining Classes and of the scholarship connected therewith may be obtained from the Principal of the College. Instruction is given in Methods of Mining, General Engineering, Mechanics, Surveying, Science, Mineralogy and Workshop practice. On completion of the course (4 years for beginners and 2 years for those having previous mining experience and requisite educational qualifications), a diploma is granted to successful students. The Mining Educational Advisory Board has the duty of annually selecting candidates for four scholarships tenable at the college (2 of Rs. 50 for Indians and 2 of Rs. 150 for Europeans). The Board gives preference to suitable candidates who have previously attended lectures at the mining centres under the Board's control.

*The following Sub-Committees have been appointed for each centre.*

## RANIGANJ DISTRICT.

*Dishargarh Centre.*

Mr. G. C. Leach (Chairman).  
 „ Glen George.  
 „ J. Mackintosh.  
 „ Geo. Miller.  
 „ F. Owen.  
 Babu M. N. Roy (Begunia).  
 „ H. P. Mukherji (Chota Dhemo).  
 „ D. C. Tarafdar.  
 The Local Lecturer (Secretary).

*Charanpur Centre.*

Mr. C. J. E. David (Chairman).  
 „ S. Heslop.  
 „ R. Mitchell.  
 „ E. M. Patterson.  
 „ A. Russell.  
 Babu Rajoni Prokash Chuckerbutti.  
 The Local Lecturer (Secretary).

APPENDIX IV—*contd.*

## MISCELLANEOUS.

Statement No. 5—*contd.*

## JHARIA DISTRICT.

<i>Jharia Centre.</i>	<i>Sijua Centre.</i>
The Chief Inspector of Mines (Chairman).	Mr. R. R. Simpson (Chairman).
Mr. T. Adamson.	„ A. Agabeg.
„ R. G. M. Bathgate.	„ E. S. Bennertz.
„ R. J. Browne.	„ W. Hutton-Williams.
„ A. S. Thomson.	Babu Sourindra Nath Dutta.
Babu Bhupati Mukherji.	„ Surendra Nath Sarkar.
„ Sita Nath Dutta.	The Local Lecturer (Secretary).
The Local Lecturer (Secretary).	

## 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 1910-11 AND 1912-13.

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, washouts, dykes, methods of maintaining the direction and gradient of such drivages.

3. *Boring and winning*.—Different systems of boring; choice of methods; cost of boring; winning coal by inclines, adits, shafts and crosscuts.

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 the safety lamp, Sir Humphrey Davy's experiment; the Davy lamp, the Clanny and Thomas and Williams lamps, the Marsaut and Mueseler lamps; fire-lamp detectors.

## SECOND YEAR COURSE 1911-12.

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 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.

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.

APPENDIX IV—*contd.*

## MISCELLANEOUS.

Statement No. 5—*concl'd.*

5. *Surface arrangements.*—Boilers; Cornish, Lancashire, and water-tube types; boiler fittings, injectors, and steam-pipes, etc.; boiler explosions, incrustation, corrosion, and priming; calculations on boilers. Heapsteads; 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.

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

A. DU PRÉ DENNING,

*Supdt. of Industries, etc.,*

*Secretary to the Mining Educational Advisory Board,*

*Writers' Buildings, Calcutta.*

## Statement No. 6.

No. 6436—152.

## GOVERNMENT OF INDIA.

## DEPARTMENT OF COMMERCE AND INDUSTRY.

## NOTIFICATION.

## GEOLOGY AND MINERALS.

*Simla, the 2nd September 1911.*

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 rules, for the whole of British India, in respect of mica, manganese, and limestone mines, other than mines which have been exempted from the operation of the Act under Section 29 thereof.

## PART I.

## MANAGEMENT.

1. When a change occurs in the name or address of the manager of a mine, notice of change of name and address of the change shall be sent within one month, by the owner, agent or manager, to the Chief Inspector of Mines in India and also to the Magistrate of the district.

2. For every mine a book, to be called the Inspection Book, shall be kept, in which Inspecting Officers shall record their observations. The owner, agent or manager shall also write or cause to be written at the commencement of the book—

- (a) the name of the mine,
- (b) the name and address of the owner of the mine and of the agent (if any),
- (c) the name and address of the manager of the mine,
- (d) the name of the competent person or persons appointed under Rule 3, and
- (e) the system of signals provided in accordance with Rule 12.

3. The manager or some competent person or persons appointed in writing, by the owner, agent or manager for the purpose shall, at least once in every 24 hours, inspect every part of a mine in or through which any person has to work or pass, and, if more than 20 persons are employed in the mine simultaneously, shall without delay write or cause to be written a report of such inspection in a book, to be called the Daily Report Book. Every such report shall be signed by the person making the inspection.

APPENDIX IV—*contd.*

## MISCELLANEOUS.

Statement No. 6—*contd.*

4. Where any person required by these rules, or by any special rule made under Section 21 of the Indian Mines Act, 1901, to make any report is unable to write, he shall be present when his report is written for him, and shall have it read over to him, and shall attach his thumb-mark to it. The person writing the report shall also sign his name at the end, together with a statement that it has been read over to the person for whom it was written.

5. All books which are required to be kept under these rules, together with a copy of the Indian Mines Act and of all rules applicable to the mine, shall be kept at an office or other building as near as conveniently may be to, and used in connection with the working of the mine, and shall be produced on the request of an Inspector of Mines, a Magistrate, or any person authorised in that behalf by the local Government.

## PART II.

## SHAFTS AND OUTLETS.

6. (a) At every mine, other than an open quarry, where more than 20 persons are employed below ground, or where in the opinion of the local Government it is necessary, there shall be at least two shafts or outlets, not nearer to one another than twenty feet, affording separate means of ingress and egress available to all the persons employed in the mines.

(b) Proper arrangements shall be made for persons to descend to and ascend from the mine at each of such shafts or outlets. If apparatus is necessary, it shall be kept on the works belonging to the mine and shall be constantly available for use.

(c) The foregoing provisions of this rule with respect to shafts and outlets shall not apply—

(i) while a shaft is being sunk or an outlet being made;

(ii) to any working for the purpose of making a communication between two or more shafts or outlets.

(d) In cases where there are special difficulties which make compliance with the foregoing provisions of this rule not reasonably practicable, the mine may be exempted therefrom by the local Government, subject to such conditions as it may think fit to impose.

## PART III.

## VENTILATION.

7. An adequate amount of ventilation shall be constantly produced in every mine, to such an extent that the shafts, tunnels and working places of the mine, and the travelling roads leading thereto, shall be in a fit state for working and passing therein.

## PART IV.

## EXPLOSIVES AND SHOT-FIRING.

Storage of explosives in mines prohibited.

8. No explosive substance shall be stored in the mine.

9. No explosive substance shall be taken into the mine except in secured cases or boxes, containing not more than 5 lbs. each, and a person shall not have in use, or keep for use, at one time in any one place within the mine, more than one of such cases or boxes. The place in the mine at which any such case or box is in use or is kept for use, unless solid ground directly intervenes, shall not be less than thirty feet from a place at which any other such case or box is in use or kept for use.

Provided that an Inspector of Mines may, in special cases and by order in writing, permit, subject to such limitations as he may prescribe, the use at one time in one place of more than one of such cases or boxes.

10. No detonator shall be carried or kept in the same case or box with any other explosive material.

Detonators.



APPENDIX IV—contd.

MISCELLANEOUS.

Statement No. 6—contd.

- 11. No person shall use any iron or steel implement in the process of charging or stemming for blasting.  
Iron or steel implements.
- 12. Blasting shall not be commenced until such warning as will prevent danger to the persons working in the mine and its vicinity has been given, by an efficient system of signals or by other means arranged by the manager. Notice shall similarly be given as soon as blasting is finished.  
Warning to be given before and after blasting.
- 13. If a shot has, or appears to have, missed fire, no person shall approach the place until at least one hour has elapsed, unless the attempt to fire the shot has been made by electrical means when this interval may be reduced to fifteen minutes after the battery has been disconnected.  
Misfires.
- 14. After a hole has been charged and made ready for firing, no person shall remove or attempt to remove anything therefrom.  
Removal of things from holes which have been charged.
- 15. A new shot-hole shall not be commenced in any portion of a shot-hole left by a previous shot.  
New shot holes.
- 16. If a shot has missed fire, no new hole shall be commenced within twelve inches from the hole in which the misfire occurred, and care shall be taken to drill the hole in such a direction that there is no danger of touching the unexploded charge.  
The new hole shall be bored in the presence of the manager or of the person who exercises daily personal supervision over the mine or that section thereof, and also, if possible, of the man who bored the hole in which the misfire occurred. Such manager or person exercising daily personal supervision shall also be present during any operations undertaken for the removal of rock within six feet of the unexploded charge.

PART V.

SAFETY OF PERSONS EMPLOYED.

- 17. The roofs and sides of all travelling roads and working places shall be made and kept secure.  
Roofs and sides of travelling roads and working places.
- 18. In open workings the overburden and all loose ground and material shall be removed sufficiently far from the edge, or otherwise made secure, in order to prevent danger to persons employed in the mine.  
Overburden, loose ground and material.
- 19. The sides of open workings shall be sloped, stepped or secured, in such a manner as to prevent danger from falls of material.  
Sides of open workings.
- 20. When an open working is worked in steps, the steps shall be of sufficient breadth in comparison with their height to secure safety.  
Steps in open workings.
- 21. Every flywheel and all exposed and dangerous parts of the machinery used in or about a mine shall be kept securely fenced.  
Fencing of exposed and dangerous parts of machinery.
- 22. Where no enactment for the regulation and inspection of steam boilers and prime movers is for the time being in force every steam boiler, whether separate or one of a range, shall have attached to it a proper safety valve, and also a proper steam gauge and water gauge, to show respectively the pressure of steam and the height of water in each boiler.  
Steam boilers.

PART VI.

MISCELLANEOUS.

- 23. Any place in or about an excavation which is dangerous shall be, and shall be kept, securely fenced. Should any doubt arise as to whether a place is dangerous or not, the opinion of an Inspector of Mines, or of the District Magistrate within whose jurisdiction the excavation is situated, shall be conclusive on the point.  
Fencing of dangerous place in an excavation.
- 24. Where an excavation extends within fifty feet of a public road or dwelling house, substantial fencing shall be erected and maintained around the excavation adjacent to the road or dwelling.  
Fencing of excavation near public road or dwelling house.

APPENDIX IV—*concl'd.*

## MISCELLANEOUS.

Statement No. 6—*concl'd.*

25. Where a place is likely to contain a dangerous accumulation of water, the working-approaching that place shall not, at any point within thirty feet thereof, exceed six feet in width or height, and there shall be constantly kept at a sufficient distance, not being less than five feet in advance, at least one borehole near the centre of the working, and sufficient boreholes on each side, and, where necessary, above or below.
26. A sufficient supply of good drinking water shall be provided or kept in or near the mine, so as to be easily accessible to all persons employed in or about the mine, and care shall be taken to secure that the supply remains free from contamination.

B. ROBERTSON,

*Secretary to the Government of India.*

## 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.