

Department of Mines, India.

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# REPORT

OF THE

## CHIEF INSPECTOR OF MINES IN INDIA

Under the Indian Mines Act (VIII of 1901)

FOR THE

YEAR ENDING 31st DECEMBER 1910

BY

G. F. ADAMS,

*Chief Inspector of Mines in India*



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CALCUTTA  
SUPERINTENDENT GOVERNMENT PRINTING, INDIA  
1911

Department of Mines, India.

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**APPENDIX I.**  
**STATISTICS OF MINES AND MINERALS.**

Table No. 1.

Number of mines regulated by the Indian Mines Act, 1901, number of workers and output of minerals, during the year 1910.

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 ground 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>A.—COAL.</b>									
							Tons.									
	Hazaribagh {															
	Bokaro-Ramgarh	4	...	4	...	...	2,166	36	43	1	80	7	8	...	15	95
	Giridih	8	8	...	4	12	678,304	8,035	1,118	24	4,177	1,656	869	60	2,585	6,762
	Bokaro-Jharis	2	...	2	...	...	82	18	4	...	22	8	22	...	30	52
	Maubhum {															
	Jharis	198	118	80	118	241	5,794,534	17,834	18,650	390	31,874	12,494	5,633	977	19,104	50,978
	Raniganj	49	12	37	31	51	478,332	2,488	990	9	3,487	1,158	517	39	1,714	5,201
	Bankura	1	...	1	1	1	4,098	19	16	...	35	1	2	...	8	38
	Sonthal Parganas {															
	Raniganj	2	...	2	1	1	1,952	8	4	...	12	4	2	...	6	18
	Rajmahal	2	...	2	...	...	2,788	18	4	...	17	4	8	...	12	29
	Palamu, Daltonganj	1	1	...	1	3	84,998	162	160	14	386	184	36	41	261	597
	Birbhum, Raniganj	1	...	1	...	...	1,664	8	6	...	14	6	2	...	8	22
	Burdwan	154	188	16	127	236	8,731,560	15,510	6,959	139	22,608	7,580	3,776	298	11,854	34,262
	Sambalpur, Hingir-Rampur	1	1	...	...	...	830	54	...	...	54	160	...	...	160	214
	<b>TOTAL</b>	<b>416</b>	<b>278</b>	<b>145</b>	<b>278</b>	<b>545</b>	<b>10,777,306</b>	<b>39,185</b>	<b>22,954</b>	<b>577</b>	<b>62,716</b>	<b>23,262</b>	<b>10,875</b>	<b>1,415</b>	<b>85,552</b>	<b>98,268</b>

APPENDIX I—contd.

STATISTICS OF MINES AND MINERALS—contd.

Table No. I—contd.

Number of mines regulated by the Indian Mines Act, 1901, number of workers and output of minerals, during the year 1910.

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 ground and 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	...	3	3	87,677	402	246	12	660	65	29	11	105	765	
		Narsinghpur, Mohpani	1	1	...	1	1	39,484	398	170	...	568	340	68	...	398	966
		Chanda, Ballarpur	1	1	...	1	4	93,276	536	...	...	536	152	...	...	152	688
	TOTAL	4	4	...	5	8	220,487	1,336	416	12	1,764	557	87	11	655	2,419	
Panjab	Jhelum	7	...	7	...	...	46,655	753	...	...	753	461	...	10	471	1,334	
		Sialpur	1	...	1	...	...	650	319	...	...	319	83	...	83	402	
		Mianwali	2	...	2	...	...	1,884	94	...	...	94	61	1	...	62	156
	TOTAL	10	...	10	...	...	49,189	1,166	...	..	1,166	605	1	10	616	1,782	
Eastern Bengal and Assam	Lakhimpur	6	5	1	4	6	297,094	918	284	...	1,202	423	240	37	709	1,911	

Baluchistan . . . . .	Sibi . . . . .	8	1	2	8	16	43,428	566	...	...	566	299	...	26	325	891	
	Loralai . . . . .	1	..	1	...	...	172	6	...	...	6	3	...	...	3	9	
	TOTAL . . . . .	4	1	3	3	16	43,600	572	..	...	572	302	...	26	328	900	
North-West Frontier Province.	Hazara . . . . .	1	...	1	...	...	90	5	...	...	5	...	...	...	...	5	
	GRAND TOTAL (COAL) FOR 1910.	443	283	160	290	575	11,387,716	43,182	23,654	589	67,425	25,149	11,212	1,499	37,860	105,385	
	" " OF PRECEDING YEAR.	511	214	297	371	712	11,294,227	44,549	24,660	685	69,894	25,460	12,311	1,628	39,397	109,291	
	DIFFERENCE . . . . .	-68	+69	-137	-81	-137	+93,489	-1,367	-1,006	-96	-2,469	-311	-1,099	-127	-1,537	-4,006	
Bengal . . . . .	B.—MICA. Cwts.																
	Monghyr . . . . .	5	...	5	3	3	543	75	90	22	187	16	55	42	118	300	
	Hazaribagh . . . . .	136	...	136	78	77	12,917	3,599	1,454	62	5,115	1,331	1,519	1,093	3,943	9,058	
	Gaya . . . . .	27	...	27	16	16	4,366	508	242	70	820	103	137	163	403	1,223	
	TOTAL . . . . .	168	...	168	92	96	17,826	4,182	1,786	154	6,122	1,450	1,711	1,298	4,459	10,581	
Madras . . . . .	Nellore . . . . .	52	7	45	42	42	3,336	945	725	93	1,763	310	315	332	957	2,720	
Rajputana . . . . .	Ajmer-Merwara . . . . .	7	...	7	...	...	213	80	3	...	88	68	40	9	117	200	
	GRAND TOTAL (MICA) FOR 1910.	227	7	220	134	138	21,375	5,207	2,514	247	7,968	1,828	2,066	1,639	5,533	13,501	
	" " OF PRECEDING YEAR.	172	...	172	72	80	32,011	3,723	2,114	272	6,109	1,274	1,381	1,101	3,756	9,865	
	DIFFERENCE . . . . .	+55	+7	+48	+62	+58	-10,636	+1,484	+400	-25	+1,859	+554	+685	+538	+1,777	+3,636	

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 1910.

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 ground 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	<b>C.—MANGANESE.</b>															
	Tons.															
	Nagpur . . . . .	15	2	13	...	...	162,850	1,628	1,206	...	2,829	442	202	10	654	3,483
	Bhandara . . . . .	4	...	4	...	...	79,611	252	142	...	394	683	494	10	1,187	1,581
	Balaghat . . . . .	6	...	6	...	...	131,776	1,493	482	53	2,028	294	119	18	431	2,459
Chhindwara . . . . .	4	1	3	...	...	19,531	184	120	...	254	209	103	...	312	566	
	TOTAL	29	3	26	...	...	393,768	3,502	1,950	53	5,505	1,628	918	38	2,584	8,089
Madras . . . . .	Vizagapatam . . . . .	8	2	6	2	3	43,980	1,074	669	...	1,743	311	186	85	582	2,325
Bombay . . . . .	Panch Mahals . . . . .	3	2	1	2	5	30,396	219	92	23	336	350	126	41	517	853
	Ratnagiri . . . . .	1	...	1	...	...	525	8	9	...	17	22	31	10	63	80
	GRAND TOTAL (MANGANESE) FOR 1910.	41	7	34	4	8	468,669	4,803	2,720	78	7,601	2,311	1,261	174	3,746	11,347
	" " OF PRECEDING YEAR.	37	1	36	10	12	357,205	5,012	2,891	83	7,886	1,705	964	140	2,809	10,795
	DIFFERENCE . . . . .	+4	+6	-2	-6	-4	+111,464	-209	-171	-5	-385	+606	+297	+34	+937	+552



		D.—LIMESTONE.														
		Tons.														
Central Provinces	Jabalpur, Katni	18	1	17	...	...	80,658	694	818	33	1,545	290	537	48	875	2,420
Panjab	Hoshiarpur	1	...	1	...	...	600	40	...	...	40	50	...	...	50	90
	GRAND TOTAL (LIMESTONE) FOR 1910.	19	1	18	...	...	81,258	734	818	33	1,585	340	537	48	925	2,510
	" OF PRECEDING YEAR.	21	...	21	16	23	56,502	1,075	1,413	64	2,552	610	562	75	1,247	3,799
	DIFFERENCE	-2	+1	-3	-16	-23	+24,756	-341	-595	-31	-967	-270	-25	-27	-322	-1,289
		E.—SALT.														
		Tons.														
Panjab	Shahpur	1	...	1	...	...	6,151	32	35	5	72	...	...	...	...	72
	Jhelum	2	...	2	...	...	102,263	381	354	54	789	31	...	...	31	820
	Mianwali	1	...	1	...	...	11,453	66	...	...	66	...	...	...	...	66
	GRAND TOTAL (SALT) FOR 1910.	4	...	4	...	...	119,867	479	389	59	927	31	...	...	31	958
	" OF PRECEDING YEAR	4	...	4	2	4	126,987	524	432	64	1,020	41	...	...	41	1,061
	DIFFERENCE	...	...	...	-2	-4	-7,120	-45	-43	-5	-93	-10	...	...	-10	-103

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 1910.

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 ground and above ground.
								Adult males.	Adult females.	Children (under 12).	Total below ground.	Adult males.	Adult females.	Children (under 12).	Total above ground.	
<b>F.—GEMS.</b>																
Carats.																
Burma . . . . .	Mogok (Rubies, etc.) . . . . .	5	5	...	1	1	262,019	626	...	...	626	837	...	...	837	1,463
Madras . . . . .	Kurnool (Diamonds) . . . . .	2	...	2	...	...	18	11	4	...	15	5	12	7	24	39
	<b>GRAND TOTAL (GEMS) FOR 1910.</b>	7	5	2	1	1	262,032	637	4	...	641	842	12	7	861	1,502
	„ OF PRECEDING YEAR	1	1	...	...	...	265,010	652	...	...	652	733	...	...	733	1,385
	<b>DIFFERENCE</b> . . . . .	+6	+4	+2	+1	+1	-2,978	-15	+4	...	-11	+109	+12	+7	+128	+117

		G.—SLATE.															
							Tons.										
							1,800										
Bengal . . . . .	Monghyr . . . . .	6	...	6	4	8	1,800	68	49	...	117	46	7	...	69	170	
Panjab . . . . .	Kangra . . . . .	2	...	2	2	2	3,750	85	...	...	85	125	27	38	190	275	
	Gurgaon . . . . .	8	...	8	2	2	1,857	39	...	26	65	100	...	7	107	172	
TOTAL . . . . .		5	...	5	4	4	5,607	124	...	26	150	235	27	45	297	447	
GRAND TOTAL (SLATE) FOR 1910 . . . . .		11	...	11	8	12	6,907	192	49	26	267	271	34	45	350	617	
" " OF PRECEDING YEAR . . . . .		11	...	11	14	14	7,054	263	73	30	366	278	30	48	356	722	
DIFFERENCE . . . . .		...	...	...	-6	-2	-147	-71	-24	-4	-99	-7	+4	-3	-6	-105	
		H.—GOLD.															
							Troy ozs.										
							737										
Bombay . . . . .	Dharwar . . . . .	1	1	...	...	...	737	18	...	...	18	256	68	...	324	337	
Madras . . . . .	Anantapur . . . . .	3	3	...	3	3	2,532	628	...	...	628	447	79	87	609	1,186	
GRAND TOTAL (GOLD) FOR 1910 . . . . .		4	4	...	3	3	3,269	686	...	...	686	703	147	37	937	1,523	
" " OF PRECEDING YEAR . . . . .		8	8	...	8	14	5,615	1,454	...	1	1,455	711	105	76	894	2,349	
DIFFERENCE . . . . .		-4	-4	...	-5	-11	-2,346	-818	...	-1	-819	-8	+42	-41	-7	-826	
		I.—IRON.															
							Tons.										
							17,646										
Bengal . . . . .	Singhbhum . . . . .	6	...	6	...	...	17,646	110	210	...	320	110	211	...	321	641	
TOTAL of preceding year . . . . .		6	...	6	...	...	15,214	...	...	...	...	190	363	...	553	553	
DIFFERENCE . . . . .		+1	...	+1	...	...	+2,432	+110	+210	...	+320	-80	-152	...	-222	+88	

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APPENDIXI—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 1910.

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 ground and above ground.
								Adult males.	Adult females.	Children (under 13).	Total below ground.	Adult males.	Adult females.	Children (under 13).	Total above ground.	
Central Provinces . . .	Nagpur . . . . .	1	...	1	...	...	18	41	25	...	66	11	16	...	27	93
	TOTAL of preceding year . . .	2	...	2	...	...	144	40	8	...	48	30	7	...	37	85
	DIFFERENCE . . . . .	-1	...	-1	...	...	-126	+1	+17	...	+18	-19	+9	...	-10	+8
Madras . . . . .	Salem . . . . .	1	...	1	1	1	Tons. 5,182	250	200	350	800	50	...	50	100	900
	TOTAL of preceding year . . .	1	...	1	...	...	737	23	19	26	68	26	20	35	81	149
	DIFFERENCE . . . . .	...	...	...	+1	+1	+4,445	+227	+181	+324	+732	+24	-20	+15	19	+751
Baluchistan . . . . .	Quetta-Pishin . . . . .	4	1	3	...	...	Cwts. 6,440	8	...	...	8	...	...	...	...	8
	TOTAL of preceding year . . .	2	...	2	...	...	10,122	6	...	...	6	10	...	...	10	16
	DIFFERENCE . . . . .	+2	+1	+1	...	...	-3,682	+2	...	...	+2	-10	...	...	-10	-8

		M.—COPPER ORE.														
		Tons.														
Bengal . . . . .	Singhbhum . . . . .	1	1	...	...	...	864	80	...	...	80	1,600	1,040	180	2,760	2,840
	TOTAL of preceding year . . . . .	2	2	...	1	1	7	180	...	...	180	118	53	10	175	355
	DIFFERENCE . . . . .	-1	-1	...	-1	-1	+857	-100	...	...	-100	+1,487	+988	+110	+2,585	2,485
		N.—FULLER'S EARTH.														
		Tons.														
Central Provinces . . . . .	Jabalpur . . . . .	1	...	1	...	...	84	...	...	...	...	...	...	...	...	...
	TOTAL of preceding year . . . . .	1	...	1	1	1	97	...	...	...	...	...	...	...	...	...
	DIFFERENCE . . . . .	...	...	...	-1	-1	-13	...	...	...	...	...	...	...	...	...
		O.—CLAY.														
		Tons.														
Central Provinces . . . . .	Jabalpur . . . . .	8	...	8	...	...	15,223	29	57	...	86	20	6	...	26	119
	TOTAL of preceding year . . . . .	1	...	1	...	...	10,214	16	36	...	52	24	8	...	32	84
	DIFFERENCE . . . . .	+2	...	+2	...	...	+5,009	+13	+21	...	+34	-4	-2	...	-6	+28
		P.—GALENA.														
		Tons.														
Burma . . . . .	Mandalay . . . . .	1	...	1	...	...	23	1,270	...	...	1,270	635	716	...	1,851	2,621
	TOTAL of preceding year . . . . .	1	...	1	...	...	2	4	...	...	4	4	...	...	4	8
	DIFFERENCE . . . . .	...	...	...	...	...	+21	+1,266	...	...	+1,266	+631	+716	...	+1,847	+2,613

\* Figures included with that of Limestone.

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 1910.

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 ground and above ground.
								Adult males.	Adult females.	Children (under 12).	Total below ground.	Adult males.	Adult females.	Children (under 12).	Total above ground.	
Bengal . . . . .	Hazaribagh . . . . .	1	...	1	...	...	Q.—TIN. Cwts. 3	7	...	...	7	4	...	...	4	11
Burma . . . . .	Maliwan . . . . .	1	1	...	...	...	1,100	20	...	...	20	40	...	...	40	60
	TOTAL (TIN) for 1910 . . . . .	2	1	1	...	...	1,103	27	...	...	27	44	...	...	44	71
	TOTAL of preceding year . . . . .	1	...	1	...	...	1,620	47	...	...	47	40	...	...	40	87
	DIFFERENCE . . . . .	+1	+1	...	...	...	-417	-20	...	...	-20	+4	...	...	+4	-16
Central Provinces . . . . .	Jabalpur . . . . .	3	...	3	...	...	R.—STEATITE. Cwts. 3,068	32	17	...	49	31	30	...	61	110
Madras . . . . .	Kurnool . . . . .	1	...	1	1	1	400	4	8	...	7	...	...	3	3	10
	TOTAL (STEATITE) for 1910 . . . . .	4	...	4	1	1	3,468	36	20	...	56	31	30	3	64	120
	TOTAL of preceding year . . . . .	3	...	3	...	...	11,296	25	15	...	40	28	18	...	46	86
	DIFFERENCE . . . . .	+1	...	+1	+1	+1	-7,828	+11	+5	...	+16	+3	+12	+3	+18	+34

		S.—GRAPHITE.														
Madras . . . . .	Vizagapatam . . . . .	1	...	1	...	...	Cwts. 5,171	11	4	...	15	5	11	...	16	31
	TOTAL of preceding year . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	DIFFERENCE . . . . .	+1	...	+1	...	...	+5,171	+11	+4	...	+15	+5	+11	...	+16	+31
Central Provinces . . . . .	Jabalpur . . . . .	...	...	...	...	...	T.—BAUXITE.	...	...	...	...	...	...	...	...	...
	TOTAL of preceding year . . . . .	1	...	1	...	...	Tons. 32	11	5	...	16	4	...	...	4	20
	DIFFERENCE . . . . .	-1	...	-1	...	...	-32	-11	-5	...	-16	-4	...	...	-4	-20
	GRAND TOTAL (ALL MINERALS).	781	310	471	442	739	Tons. 12,103,439 Cwts. 37,575 Ounces. 8,269 Carats. 262,032	57,732	30,664	1,382	89,778	33,981	17,299	3,623	54,902	144,680
	GRAND TOTAL OF PRECEDING YEAR.	785	226	559	495		Tons. 11,868,278 Cwts. 55,093 Ounces. 5,815 Carats. 265,010	57,604	31,666	1,225	90,495	31,281	15,821	3,113	50,215	140,710
	DIFFERENCE . . . . .	-4	+84	-88	-53	-122	Tons. +235,161 Cwts. -17,518 Ounces. -2,346 Carats. -2,978	+128	-1,002	+157	-717	+2,700	+1,478	+509	+4,687	+3,970

## APPENDIX I—contd.

Table No. 2.

Number of mines opened and closed during the year ending 31st  
December 1910.

Province.	District.	Number of mines opened.	Number of mines closed.	
<b>A.—COAL.</b>				
BENGAL . . . . .	Hazaribagh {	Bokaro-Ramgarh . . . . .	1	8
		Giridih . . . . .	...	8
	Manbhum {	Jharia . . . . .	11	14
		Raniganj . . . . .	7	10
	Burdwan, Raniganj . . . . .	6	17	
	Bankura " . . . . .	1	...	
	Sonthal Parganas, Raniganj . . . . .	...	1	
TOTAL . . . . .		26	48	
PANJAB . . . . .	{	Jhelum . . . . .	8	2
		Mianwali . . . . .	1	1
TOTAL . . . . .		4	3	
BALUCHISTAN . . . . .	Sibi, Khost . . . . .	2	...	
BURMA . . . . .	Chhindwin . . . . .	...	1	
TOTAL (COAL) . . . . .		82	62	
<b>B.—MICA.</b>				
BENGAL . . . . .	Hazaribagh . . . . .	80	68	
MADRAS . . . . .	Nellore . . . . .	6	30	
RAJPUTANA . . . . .	Ajmer-Merwara . . . . .	1	2	
TOTAL (MICA) . . . . .		87	95	
<b>C.—MANGANESE.</b>				
BOMBAY . . . . .	Ratnagiri . . . . .	1	1	
CENTRAL PROVINCES . . . . .	{	Nagpur . . . . .	1	1
		Chhindwara . . . . .	1	...
TOTAL . . . . .		2	1	
MADRAS . . . . .	Vizagapatam . . . . .	1	...	
TOTAL (MANGANESE) . . . . .		4	2	



APPENDIX I—*contd.*Table No. 2—*contd.*

Number of mines opened and closed during the year ending 31st  
December 1910.

Province.	District.	Number of mines opened.	Number of mines closed.
<b>D.—LIMESTONE.</b>			
CENTRAL PROVINCES . . . . .	Jabalpur . . . . .	4	1
PANJAB . . . . .	Hoshiarpur . . . . .	1	1
TOTAL (LIMESTONE) . . . . .		5	2
<b>E.—SALT.</b>			
PANJAB . . . . .	Jhelum . . . . .	1	..
<b>F.—GEMS.</b>			
MADRAS . . . . .	Kurnool . . . . .	2	2
<b>G.—TIN.</b>			
BENGAL . . . . .	Hazaribagh . . . . .	1	1
<b>H.—STEATITE.</b>			
CENTRAL PROVINCES . . . . .	Jabalpur . . . . .	1	1
MADRAS . . . . .	Kurnool . . . . .	1	1
TOTAL (STEATITE) . . . . .		2	2
<b>I.—GRAPHITE.</b>			
MADRAS . . . . .	Visagapatam . . . . .	1	..
GRAND TOTAL . . . . .		135	156

## APPENDIX I—contd.

Table No. 3.

List of plans of abandoned and discontinued mines received during the year 1910.

Registered number.	Name and situation of mine.	Name and number of seam.	Name of mineral worked.	Name of owner.	Date of abandonment or discontinuance.
81	Chota Dhemu Mine, Dishargarh P. O.	Dishargarh Seam . . .	Coal	Chota Dhemu Coal Co. .	October 1908.
82	Loyabad Mine, Bansjora P. O.	No. 17 Seam . . .	Coal	Barakar Coal Co., Ld. .	20th March 1909.
88	Pandakanali Mine, Bansjora P. O.	No. 17 Seam . . .	Coal	Pandakanali Coal Co., Ld.	5th August 1909.
84	South Bhuputdih Mine, Katrasgarh P. O.	No. 10 Seam . . .	Coal	Katras Bhuputdih Coal Co.	9th May 1909.
85	Koniapur Mine, Sitarampur P. O.	Dishargarh Seam . . .	Coal	Lutchipur Coal Co., Ld. .	15th November 1909.
86	Mugma Mine, Nirshaohatti P. O.	.....	Coal	I. N. Chandra and Sons .	1st November 1909.
87	No. 2, Pathordih Shaft and Dandidih Incline, Serampur Colliery, Giridih P. O.	Kurhurbari Lower Seam .	Coal	East Indian Railway Co..	31st March 1909.
88	Sunpur Mine, Chora P. O.	Sunpur Seam . . .	Coal	Ondal Coal Co., Ld. .	June 1909.
89	Bowlah Mine, Chora P. O.	Bowlah Seam . . .	Coal	Ondal Coal Co., Ld. .	April 1909.
90	Ghusik Mine, Kalipahari P. O.	Ghusik Seam . . .	Coal	Ghusik and Muslin Collieries, Ld.	June 1909.
91	Egarcoor Quarry, Barakar P. O.	Seam unknown	Coal	Ahmed Yusuf . . .	July 1908.
92	Ketherdih Quarry, Mugma P. O.	Ketherdih Seam . . .	Coal	Kunja Behari Ghosh .	January 1909.
93	Chandore Mine, Katrasgarh P. O.	Nos. 8 and 7 Seams . . .	Coal	Chandore Coal Co. . . .	15th August 1909.
94	Angarpatra Mine, Katrasgarh P. O.	No. 13 Seam . . .	Coal	Trigunait Brothers . . .	27th January 1909.
95	Hariladih Mine, Jharia P. O.	No. 16 Seam . . .	Coal	Standard Coal Co., Ld. .	25th October 1909.
96	Sijua Mine, Sijua P. O.	No. 16 Seam . . .	Coal	Sijua Coal Co., Ld. . .	15th December 1909.
97	Pipratand Mine, Katrasgarh P. O.	Top, Middle and Lower of Murulidih Basin.	Coal	Pipratand Coal Co., Ld. .	26th November 1909.
98	Mandra Khas Mine, Nowagarh P. O.	...	Coal	Gour Mohun Singh . . .	...
99	Mandra Mine, Nowagarh P. O.	...	Coal	Mouji Jiva . . . .	...
100	Basantipur Mine, Chowkidanga.	Mamudpur Seam . . .	Coal	Basanti Oakdene Coal Co.	8th December 1909.
101	Jogta Mine, Sijua P. O.	No. 13 Seam . . .	Coal	Agabeg Brothers . . .	13th March 1910.
102	Nuniapool Mine, Kalipahari P. O.	Dobalia Seam . . .	Coal	Meyer Coal Co. . . .	15th June 1909.
103	Jubilee Mine, Kalipahari P. O.	Bhutdoba Top Seam . . .	Coal	Meyer Coal Co. . . .	19th June 1909.
104	Nudkharuki Mine, Nos. 11, 12, 13 and 14 Inclines, Nos. 8, 9 and 10 Inclines, Nowagarh P. O.	No. 8 Seam. No. 10 Seam.	Coal	Nudkharuki Coal Co. . .	January 1910.

## APPENDIX I—contd.

Table No. 3—contd.

List of plans of abandoned and discontinued mines received during the year 1910.

Registered number.	Name and situation of mine.	Name and number of seam.	Name of mineral worked.	Name of owner.	Date of abandonment or discontinuance.
105	Sanctoria Mine, Dishargarh P. O.	Sanctoria Seam	Coal	Bengal Coal Co., Ltd.	1st April 1910.
106	Gondodih Mine, Kusunda P. O.	Nos. 8, 9, and 10 Seams	Coal	Baniganj Coal Association, Ltd.	1st June 1909.
107	Busserya Mine, Kusunda P. O.	Nos. 10 and 11 Seams	Coal	Busserya Coal Co., Ltd.	21st March 1909.
108	Koolustore Mine, Chowkidanga P. O.	Toposi Seam	Coal	Koolustore Coal Co., Ltd.	3rd May 1910.
109	Katras Mine, Katrasgarh P. O.	No. 11 Seam	Coal	Nowagarh Coal Co., Ltd.	20th March 1909.
110	Kessabganj Mine, Kalipahari P. O.	Kessabganj Seam	Coal	G. M. Agreeable Coal Co.	6th June 1909.
111	Banksimulla Mine, Charanpur P. O.	Sibpur Seam	Coal	Bengal Coal Co., Ltd.	26th June 1910.
112	Mudidih Mine, Sijua P. O.	Nos. 10, 11, and 12 Seams	Coal	Reliance Coal Co., Ltd.	No. 0 Seam—Unknown. No. 11 Seam—March 1909. No. 12 Seam—April 1910.
113	Upper Kandra Mine, Bhujudih P. O.	Nos. 11 and 12 Seams	Coal	South Jharia Coal Co.	...
114	Domohani Mine, Kurhurbari Colliery, Giridih P. O.	Kurhurbari Lower Seam	Coal	East Indian Railway Co.	December 1909.
115	Egarcoor Mine, Chirkunda P. O.	Egarcoor Lower Seam	Coal	Egarcoor Coal Association	February 1910.
116	Nimtala Mine, Kurhurbari Colliery, Giridih P. O.	Kurhurbari Bottom Seam	Coal	East Indian Railway Co.	March 1909.
117	Ramnadih Mine, Kurhurbari Colliery, Giridih P. O.	Kurhurbari Lower Seam	Coal	East Indian Railway Co.	October 1909.
118	New Chandore Mine, Katrasgarh P. O.	Nos. 6 and 7 Seams	Coal	S. Trigunait	March 1909.
119	Koradih Mine, Katrasgarh P. O.	Seam unknown	Coal	C. M. & Co.	July 1909.
120	No. 2 Incline Mine, Kurhurbari Colliery, Giridih P. O.	Kurhurbari Lower Seam	Coal	East Indian Railway Co.	November 1909.
121	Morishkotta Mine, Sitarampur P. O.	Dishargarh Seam	Coal	Sudihi Coal Co., Ltd.	April 1910.
122	Bamundiha Mine, Sitarampur P. O.	Dishargarh Seam	Coal	Damuda Coal Co., Ltd.	30th June 1910.
123	Bandarhoca Mine, Nirshachatti P. O.	Bandarhoca Top and Bottom Seams.	Coal	Friends Coal Co.	22nd October 1909.
124	Titulmuri Mine, Sijua P. O.	No. 10 Seam	Coal	Titulmuri Coal Co., Ltd.	31st May 1909.
125	Ekra Khas Mine, Bansjora P. O.	Nos. 11 and 15 Seams	Coal	Maharaja M. C. Nandi	June 1910.
126	Kankani Mine, Bansjora P. O.	No. 16 Seam	Coal	Eastern Coal Co., Ltd.	February 1910.
127	Baraboni Mine, Asansol P. O.	Bottom Seam (Sanctoria P)	Coal	Baraboni Coal Concern, Ltd.	21st June 1910.

APPENDIX I—*contd.*Table No. 3—*conold.*

List of plans of abandoned and discontinued mines received during the year 1910.

Registered number.	Name and situation of mine.	Name and number of seam.	Name of mineral worked.	Name of owner.	Date of abandonment or discontinuance.
128	Vanora Mine, Charanpur P. O.	Top Seam	Coal	Maharaja M. C. Nandi	17th August 1909.
129	Egarcoor Mine, Chirkunda P. O.	Egarcoor Seam	Coal	New Chirkunda Coal Co.	May 1910.
180	Gangutia Mine, Dishargarh P. O.	Hatnoi Seam	Coal	Bengal Nagpur Coal Co., Ld.	April 1909.
181	Jamgram Mine, Panuria P. O.	33 feet Seam	Coal	Barakar Coal Co., Ld.	December 1909.

Table No. 4.

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

YEAR.	Coal.	Manganese.	Mica.	Limestone.	Salt.
	Tons.	Tons.	Cwts.	Tons.	Tons.
1901 . . . . .	6,251,522	162,057	19,900	28,000	90,242
1902 . . . . .	6,790,507	144,037	21,360	30,091	87,361
1903 . . . . .	6,812,725	171,223	20,100	35,238	90,667
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

## APPENDIX I—contd.

Table No. 5.

The following table shows the amount of coal raised, the average number of persons working daily and the death-rates during the years 1901 to 1910 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.
1901 . . . . .	6,251,522	85,861	58	9.28	.67
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	105,285	160	14.05	1.52

Table No. 6.

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.
1909	United Kingdom . . . . .	263,774,312	997,708	264
1908	United States . . . . .	369,158,773	690,438	534
"	Germany . . . . .	195,307,776	667,420	292
"	Austria . . . . .	44,757,835	131,821	339
"	France . . . . .	33,283,207	194,980	170
"	Belgium . . . . .	21,371,726	145,277	147
"	Nova Scotia . . . . .	6,299,282	12,933	487
"	British Columbia . . . . .	2,109,387	6,073	347
"	Australia . . . . .	10,193,135	20,225	503
"	Natal . . . . .	1,669,774	8,962	186
"	Transvaal . . . . .	2,689,904	7,325	343
"	Japan . . . . .	13,447,567	126,999	105
"	New Zealand . . . . .	1,860,975	3,894	477
1907	Russia . . . . .	23,587,610	164,819	143
	Totals and average . . . . .	989,511,263	3,179,374	311
1910	British India . . . . .	11,387,716	105,285	108

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

Table No. 1.

List of Fatal Accidents in mines regulated by the Indian Mines Act, 1901, during the year 1910.

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—(27 deaths).</b>						
1	7th February, 10 P.M.	Dishargarh Mine, Dishargarh P. O.	Equitable Coal Co., Ltd.	Lilu Roy, (m.), 33, Bidesi Roy, (m.), 36, Aklu Roy, (m.), 36, Kodu Roy, (m.), 32, Balchand Roy, (m.), 48, Keharia Chamar, (m.), 40, Talebor Kumar, (m.), 32, Churu Naia, (m.), 28, Rewa Turi, (m.), 38, Nathu Roy, (m.), 36, <i>Coal-cutters.</i> Sambhu Bauri, (m.), 18, <i>Pump khalassi.</i>	Coal	While ten men were working with safety lamps in the Hatnol seam which was connected with the Sanctoria seam by an inclined drift, and while one man was passing with an open light in the Sanctoria seam near the drift an explosion occurred. The ten men in the Hatnol seam were apparently killed outright and the man in the Sanctoria seam died about twelve hours afterwards. <i>See Report, page 5.</i> Inspection and inquiry made.
2	29th June, 9-45 A.M.	Saltore Mine, Dishargarh P. O.	Saltore Coal Co., Ltd.	Ramdhari Singh, (m.), 33, <i>Head filter.</i>	Coal	Deceased and others were working at a pump within 20 feet of the shaft bottom and were using open acetylene lamps. An ignition of fire-damp took place and they were all more or less severely burnt. Ramdhari died six hours later. <i>See Report, page 8.</i> Inspection and inquiry made.
3	27th July, 11-15 A.M.	Muslia Mine, Asansol P. O.	Ghusik and Muslia Collieries, Ltd.	Babu Lal Dome, (m.), 42, <i>Bucket-man.</i>	Coal	Deceased and others were working at the shaft top and one of them struck a match in the open end of an air pipe which was about to be connected with a fan. Fire-damp was ignited and they were severely burnt. Babu Lal died on the following day. The ignition was followed by a sharp explosion which wrecked the head-gear and surface machinery. <i>See Report, page 8.</i> Inspection and inquiry made.
4	28th November, 3-30 P.M.	Namdang Mine, Margherita P. O.	Assam Railways and Trading Co., Ltd.	R. W. Sergeant, (m.), 32, <i>Asst. Foreman.</i> Mungru Tali, (m.), 29, Bokru Gore, (m.), 37, <i>Sirdars.</i> Ram Kumar, (m.), 25, <i>Basket-filler.</i> Lachman Kurmi, (m.), 28, <i>Opening man.</i> Godadhor Gore, (m.), 31, <i>Basket-filler.</i> Khudia, (m.), 19, <i>Brick mistry.</i> Sriram Kabbar, (m.), 29, <i>Basket-filler.</i>	Coal	Four explosions occurred during the day from fire in the old workings. At the second five persons and at the fourth nine persons received injuries causing death, while at each of these two explosions four persons were seriously injured. <i>See Report, page 9.</i> Inspection and inquiry made.

Hiralal Lohar, (m.), 28,  
*Plate layer.*  
 Mahadeo Kole, (m.), 28,  
*Opening man.*  
 Sankar Keot, (m.), 31,  
*Timber man.*  
 Lalarock Kurmi, (m.), 19,  
*Basket-filler.*  
 Dhoneswar Gore, (m.), 28,  
*Plate layer.*  
 Choiton Koiborto, (m.), 26,  
*Basket-filler.*

FALLS OF ROOF AND SIDES—(84 deaths).

(a) Falls of roof—(52 deaths).

5	3rd January, 2 A.M.	Hatgaroie Mine, Sitarampur P. O.	Lutchipur Coal Co., Ltd.	Bhaglu Kole, (m.), 14, <i>Coal-carrier.</i>	Coal .	Deceased was lying asleep on a sleeper when a pane of roof 15' x 8' x 4" thick fell upon him, injuring him internally, from the effects of which he died eight hours later. Inspection and inquiry made.
6	6th January, 3 A.M.	Baraboni Mine, Asansol P. O.	Baraboni Coal Concern, Ltd.	Ram Majhi, (m.), 46, <i>Sirdar.</i>	Coal .	Deceased was robbing coal from the roof of a gallery when a fall of coal and roof stone came away and killed him. He was not a miner and should neither have been getting coal nor been in the mine at this time. Eight months before he was severely injured whilst robbing coal in a similar manner. Inspection and inquiry made.
7	7th January, 1-30 P.M.	Laikdih Mine, Barakar P. O.	Bengal Coal Co., Ltd.	Souti Bauri, (m.), 27, <i>Miner.</i>	Coal .	Deceased entered the mine when he knew the superior officials would be absent and deliberately went alone into a fenced gallery to cut coal. Some roof coal fell upon him while he was at work and injured him so severely that he died two days later. Inspection and inquiry made.
8	2nd February, 11-30 P.M.	Budruchak Mine, Sijua P. O.	Budruchak Coal Mining Co., Ltd.	Bhican Koiri, (m.), 36, <i>Miner.</i>	Coal .	Deceased was enlarging a gallery and released some roof stone 7' 3" x 6' 6" x 6", which fell on him and killed him outright. <i>See Report, page 11.</i> Inspection and inquiry made.
9	3rd February, 11-30 A.M.	South Kustote Mine, Kusunda P. O.	Raniganj Coal Association, Ltd.	Gambhiri Shaw Dhobi, (m.), 23, <i>Miner.</i>	Coal .	Deceased was cutting side to enlarge a dip gallery which had been driven narrow, when a piece of roof 24' long by 5' 6" to 0" wide by 2' thick fell from between two slips and killed him on the spot. Inspection and inquiry made.
10	5th February, 12 Noon.	Gopalichak Mine, Jharia P. O.	Gopalichak Coal Co., Ltd.	Lillu Meah, (m.), 35, <i>Miner.</i>	Coal .	Deceased was cutting coal at a pillar when two tons of coal suddenly fell, killing him instantaneously. <i>See Report, page 12.</i> Inspection and inquiry made.
11	18th February, 4-50 A.M.	Tikak Mine, Margherita P. O.	Assam Railways and Trad- ing Co., Ltd.	Bhagirathi Tanti, (m.), 29, <i>Basket-filler.</i>	Coal .	Deceased was lifting a full basket when some top coal and roof dislodged to the right. The man being engaged with the basket could not get clear in time and the fall struck him with full force. He died soon after reaching the hospital. Inquiry made.
12	20th February, 2 P.M.	Chanach Mine, Barakar P. O.	Bengal Coal Co., Ltd.	Jainti Bauri, (m.), 28, <i>Miner.</i>	Coal .	While the sirdar was on the surface deceased went with two women through a fence into a disused gallery to rob a pillar. He had cut only three baskets full of coal when a portion of the roof measuring 32' long x 16' wide fell and crushed him to death, seriously injuring one of the women. Inspection and inquiry made.
13	25th February, 4 A.M.	Tirap Mine, Margherita P. O.	Assam Railways and Trad- ing Co., Ltd.	Budhu Goal, (m.), 29, <i>Coal-cutter.</i>	Coal .	Two men were cutting a road to commence a new coal opening when a piece of coal weighing about 2 maunds came away from a soft parting at a height of 8' and fell on deceased. He died on the 13th March after amputation of the leg. Inquiry made.
14	25th February, 11 A.M.	Namdang Mine, Margherita P. O.	Assam Railways and Trad- ing Co., Ltd.	Gulgharie Kole, (m.), 27, <i>Opening man.</i>	Coal .	Two cwts. of coal fell off a slip, rolling on to deceased. He died before being got out of the mine. He had been warned by another miner that the place sounded hollow. Inquiry made.

## APPENDIX II—contd.

## Fatal Accidents, 1910—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>						
15	9th March, 12 Noon.	Namdang Mine, Margherita P. O.	Assam Railways and Trading Co., Ltd.	Keshu Garait, (m.), 22 <i>Basket-filler.</i>	Coal .	Deceased was clearing down some loose coal near the bolt hole, when a small piece of coal, weighing about 7 lbs., fell from the roof from a height of 14 feet. He died on the 4th April from spinal fracture. Inquiry made.
16	10th March, 10-30 A.M.	Bulliar Mine, Kusunda P. O.	East Indian Coal Co., Ltd.	Gobind, (m.), 30, <i>Miner.</i>	Coal .	While taking down roof coal a portion of jhama roof fell from a pothole and injured deceased so severely that he died the same day. Inspection and inquiry made.
17	10th March, 12-30 A.M.	Kendwadih Mine, Kusunda P. O.	East Indian Coal Co., Ltd.	Jitu Turi, (m.), 35, Jiblal Turi, (m.), 30, <i>Miners.</i> Bidki Turin, (f.), 22, Patrika Turin, (f.), 25, <i>Carriers.</i>	Coal .	Deceased were illegally getting off side from a pillar when an area of roof coal 30' to 15' by .26' by 3' 6" thick fell suddenly from alipe and killed them. See Report, page 12. Inspection and inquiry made.
18	23rd March, 10-20 A.M.	Nandi Mine, Nandi P. O.	Adjai Coal Co., Ltd.	Suku Kurmi, (m.), 40, <i>Coal-cutter.</i>	Coal .	Deceased and another were engaged in getting roof coal in an old gallery and had fired a shot. While drilling a hole for a second shot about five tons of coal and stone fell from a height of 13 feet. Suku was killed on the spot and the other slightly injured. Inspection and inquiry made.
19	7th April, 8 P.M.	West Ledo Valley Mine, Margherita P. O.	Assam Railways and Trading Co., Ltd.	Charam Ghatwal, (m.), 27, <i>Basket-filler.</i>	Coal .	Deceased was filling a basket when a piece of coal, weighing about 6 cwts., fell from a height of 9 feet. It came from a slip at the side of an opening measuring 6 yards by 5 yards. He died in five minutes. Inquiry made.
20	11th April, 11-45 P.M.	Aldih Mine, Sitarampur P. O.	Aldih Coal Co., Ltd.	Sibhu Bauri, (m.), 40, <i>Miner.</i>	Coal .	After being turned out once by the sirdar deceased again went over a fence into a dangerous gallery and was engaged in cutting roof coal when a heavy piece of it fell upon his leg and broke it. He died from the effects three days later. Inspection and inquiry made.
21	15th April, 10 A.M.	Alkusa Mine, Kusunda P. O.	Baniganj Coal Association, Ltd.	Nanku Meah, (m.), 35, <i>Coal-cutter.</i>	Coal .	The manager had just given orders to have a dangerous piece of overhanging coal at a pillar removed, and when he was standing 8 feet away talking to the sirdars, deceased came up from his working place, presumably to speak to them, and as he passed under this piece, coal 13' x 4' x 1' 6" fell from a height of 6' 6" killing him instantaneously. See Report, page 12. Inspection and inquiry made.
22	29th April, 8-30 A.M.	Salanpur Mine, Sitarampur P. O.	Borrea Coal Co., Ltd.	Chamea Passin, (f.), 38, <i>Coal-carrier.</i>	Coal .	A piece of roof within a fence was found by the deputy overman to be unsafe. Deceased and several others were standing on the other side of the fence and were warned not to pass it. Immediately the official turned his back deceased passed the fence to pick up her basket when the roof fell and knocked her down. She died from the effects of the injuries at 9 o'clock the next morning. Inspection and inquiry made.



23	9th May, 8 P.M.	Sudhi Mine, Sitarampur P. O.	Baraboni Coal Concern, Ld.	Falar Majhi, (m.), 40, <i>Miner.</i>	Coal .	Instead of working at the coal face, deceased was cutting floor coal beyond a fence when a portion of the roof fell from between two slips and killed him. Inspection and inquiry made.
24	13th May, 3-30 P.M.	Burbia Mine, Kodarma P. O.	T. H. Wards and Har Nath Singh.	Genda Gope, (m.), 14, <i>Miner.</i>	Mica .	Deceased was working with several others in a small open mica mine, clearing away debris to prepare for re-starting the mine when a tree 32' 6" high growing on the edge of the excavation, was blown over in a gale of wind causing a large mass of loose quartz to fall into the mine and bury him. His death was caused by suffocation. Inspection and inquiry made.
25	18th May, 11 A.M.	Charanpur Mine, Charanpur P. O.	Apcar & Co.	Sooke Kora, (f.), 17, <i>Coal-carrier.</i>	Coal .	Deceased was filling a basket with coal in a gallery beneath roof coal which was being taken down. About a ton of coal fell on her, killing her on the spot. <i>See Report, page 12.</i> Inspection and inquiry made.
26	2nd July, 6 A.M.	Dandot Mine, Dandot P. O.	North Western Railway .	Sahib Dad, (m.), 30, <i>Miner.</i>	Coal .	A stone fell from the roof on to him and caused a fracture of the spine about its middle. He died on the 25th September through the injuries received.
27	28th July, 1 A.M.	Nadir Khan Mine, Khost Colliery, Khost P. O.	North Western Railway .	Dostal, (m.), 28, <i>Miner.</i>	Coal .	Deceased was lying full length on his back waiting for a bar to be set in his working face when a piece of shale roof, weighing about 30 lbs., fell from between two bars upon his stomach and injured him so severely that he died within five minutes. The place was well timbered. Inspection and inquiry made.
28	9th August, 8-30 P.M.	Ledo Valley, New East Mine, Margherita P. O.	Assam Railways and Trading Co., Ld.	Akloo, (m.), 30, <i>Basket-filler.</i>	Coal .	Deceased was filling a basket when a small piece of coal rolled over from a height of 5 feet, knocking him down. As a sirdar was helping him up, another piece came and fell on his head. Total weight of fall was 5 cwts. He was killed on the spot. Inquiry made.
29	25th September, 1-30 P.M.	Dishargarh Mine, Dishargarh P. O.	Equitable Coal Co., Ld. .	Mohini Baurin, (f.), 16, <i>Carrier.</i>	Coal .	Whilst a gang of six men and six women were clearing stone at a fall of roof, about half a ton of stone fell from the cavity left by the original fall. Mohini was killed; Luka Bauri and the European assistant in charge were severely injured. Two others were slightly hurt. Inspection and inquiry made.
30	1st October, 8-30 P.M.	Dandot Mine, Dandot P. O.	North Western Railway .	Bhagat Ram, (m.), 18, <i>Miner.</i>	Coal .	Deceased was cutting coal at the face when the roof fell in and buried him, killing him instantaneously.
31	2nd October, 2-30 P.M.	Nodiha Mine, Dishargarh P. O.	Nodiha Coal Co., Ld. .	Chepia Manjhin, (f.), 15, <i>Loading woman.</i>	Coal .	Deceased was about to lift a basket full of coal when a piece of roof coal, 3' 6" x 2' 3" x 1' 3" upon which her father had been working a few moments before, fell and broke her leg. She died from the effects of the injury ten days later. Inspection and inquiry made.
32	8th October, 8 P.M.	Alkusa Mine, Kusunda P. O.	Raniganj Coal Association, Ld.	Niru Barwi, (m.), 35, <i>Prepping mistry.</i>	Coal .	Deceased was assisting in the withdrawal of timber from an area from which the coal had been extracted, and in attempting to recover a wedge from beneath roof from which the timber supports had been taken out, he was caught by a fall of roof coal, which was 3' thick and fell over an area 6' square, and was killed on the spot. Inspection and inquiry made.
33	15th October, 7-15 P.M.	Sitalpur Mine, Dishargarh P. O.	Bongal Coal Co., Ld. .	Bachu Lodh, (m.), 25, Debi Gararia, (m.), 30, Mathu Passi, (m.), 30, Sukhi Passi, (m.), 28, Ramdin Passi, (m.), 27, Kabardar Passi, (m.), 23, Nani Passi, (m.), 32, Dooli Passi, (m.), 28, Nathu Passi, (m.), 35, Mahabir Ahir, (m.), 28, <i>Miners.</i> Bamsurah Gope, (m.), 23, <i>Stone-cutter.</i> Kohil Singh, (m.), 25, <i>Sirdar.</i>	Coal .	A pillar had been goafed and the timber had been withdrawn. In order to secure a little coal that had come down with the goafed roof the manager had the timber reset. While the twelve deceased were picking up this coal the roof collapsed over the timber and completely buried them. <i>See Report, page 12.</i> Inspection and inquiry made.

-APPENDIX-H-*contd.*

Fatal Accidents, 1910-*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—<i>contd.</i></b>						
<b>(a) Falls of roof—<i>concl'd.</i></b>						
34	27th October, 11 P.M.	Aldih Mine, Sitarampur P. O.	Aldih Coal Co., Ltd.	Tribhanga Bauri, (m.), 25, <i>Miner.</i>	Coal .	Deceased left his proper working place on the plea of getting a drink of water. About an hour later a heavy fall took place and several miners were directed to the place by his cries. They found him under a piece of coal, measuring 5½' x 5' x 2½' which had fallen from the corner of a pillar. A hammer and wedge were lying by his side. The place was a disused gallery properly fenced. Inspection and inquiry made.
35	17th November, 12-30 P.M.	West Ledo Valley Mine, Margherita P. O.	Assam Railways and Trading Co., Ltd.	Persadio, (m.), 30, <i>Basket-filler.</i>	Coal .	Deceased was walking away dragging his <i>kodali</i> when about 6 cwts. of coal fell without warning out of the middle of an opening and caught him. It knocked him on to the <i>kodali</i> smashing his thigh. A European assistant inspected the place ten minutes before and all was safe. Deceased died on reaching hospital. Inquiry made.
36	17th November, 3 P.M.	South Gobindpur Mine, Katrasgarh P. O.	South Gobindpur Colliery, Ltd.	Saoni Kohlin, (f.), 13, <i>Coal-carrier.</i>	Coal .	Deceased went with her father to rob coal from old workings. Whilst doing so she was struck on the head by a fall of coal and sustained injuries from which she died shortly after. Inspection and inquiry made.
37	30th November, 4 P.M.	Kusumkajali Mine, Barakar P. O.	Royal Bengal Coal Co.	Matu Singh, (m.), 25, Rajabali, (m.), 27, Jodu Mahato, (m.), 30, <i>Miners.</i>	Coal .	Five persons were cutting floor coal in a gallery when a piece of stone measuring 12' x 6' 6" x 1' 4" fell upon them, killing three on the spot and injuring the other two. See Report, page 14. Inspection and inquiry made.
38	8th December, 11 P.M.	West Gopalichak Mine, Kusunda P. O.	Gopalichak Coal Co., Ltd.	Sirem Bauri, (m.), 38, <i>Coal-cutter.</i>	Coal .	Whilst deceased was taking down roof coal a fall came away and struck him. He sustained a fracture of the arm and other injuries from the effects of which he died a few days later. The fall was 5' x 4' x 1½" thick. Inspection and inquiry made.
39	14th December, 2 A.M.	Barkui Mine, Pench Valley P. O.	Pench Valley Coal Co., Ltd.	Parbutia Bania, (f.), 25, <i>Coal-carrier.</i>	Coal .	A hewer, who was pillar-cutting, gave the signal to two women that the roof was "working" and deceased in her excited state ran in the direction of the goaf and was just caught by the edge of the fall. She sustained a fracture of the skull.
40	19th December, 12-30 A.M.	Bhagaband Mine, Jharis P. O.	Borrea Coal Co., Ltd.	Nuni Muni Ghatwarin, (f.), 25, <i>Coal-carrier.</i>	Coal .	Deceased was struck by the fall of a slab of roof shale measuring 4' x 7' 6" x 3" thick. Inspection and inquiry made.
<b>Falls of sides—(32 deaths).</b>						
41	16th February, 3 P.M.	Namdang Mine, Margherita P. O.	Assam Railways and Trading Co., Ltd.	Jagatdhari Gond, (m.), 26, Khedu Majhi, (m.), 29, <i>Basket-fillers.</i>	Coal .	Three tons of coal fell from a slip on the top side of an opening, killing Jagatdhari Gond on the spot. Khedu Majhi died on the 18th February. Inquiry made.
	4th May, 5 P.M.	Tarajhopa Mine, Kodarna P. O.	Tofani Singh . . .	Gondo Chassier, (m.), 40, Jitna, (m.), 35, <i>Mica petty contractors.</i>	Mica .	Deceased entered a discontinued mine to get mica to sell to the owner of the mine and were buried by a fall of side 15' high by 12' wide by 1½' thick. Inspection and inquiry made.

43	23rd May, 1-30 P.M.	Chowrai Mine, Dishargarh P. O.	Equitable Coal Co., Ltd.	Bhagbol Majhi, (m.), 30, Coal-cutter.	Coal .	Deceased went through a fence and whilst robbing a pillar was killed by a fall of about three tons of coal from the side. Inspection and inquiry made.
44	31st May, 6 A.M.	Chinchuria Mine, Aansol P. O.	New Beerbhun Coal Co., Ltd.	Pio Majhain, (f.), 14, Coal-carrier.	Coal .	Deceased was filling a basket with coal at a point where a gallery was being widened when about 10 tons of side coal fell over. She was pinned down and received injuries from which she died about an hour afterwards. See Report, page 14. Inspection and inquiry made.
45	6th July, 10 A.M.	Old East Ledo Mine, Margherita P. O.	Assam Railways and Trading Co., Ltd.	Mahadeb, (m.), 30, Opening-man.	Coal .	About 20 tons of coal rolled off the side of an opening which was very steep and 21' by 24' by 20' high in size. There were three escape roads and deceased would easily have got clear but unfortunately fell. He was killed on the spot. Inquiry made.
46	7th July, 1-30 A.M.	Bhowra Mine, Jharis P. O.	Eastern Coal Co., Ltd.	Bara Darbari Syne, (m.), 40, Miner. Chota Darbari Syne, (m.), 12, Coal-carrier.	Coal .	In the absence of the official in charge of the mine both deceased started to cut coal in their carrying road, which was 34 feet high. After working for a short time they sat down to smoke when suddenly and without warning a slab of side coal 27' high by 10' wide by 1½' thick on which they had been working fell and buried them. See Report, page 15. Inspection and inquiry made.
47	14th July, Midday.	Inurkurti or D Mine, Sydapuram P. O.	A. Subba Naidu	Uta Chinna Vadu, (m.), 22, Goripati Papadu, (m.), 25, Drilling coolies.	Mica .	An overhanging mass of decomposed pegmatite fell on deceased from the side of the quarry. See Report, page 15. Inspection and inquiry made.
48	24th July, 4-30 A.M.	Murulidih Mine, Mohoda P. O.	Bengal Coal Co., Ltd.	Dayal Turi, (m.), 25, Miner.	Coal .	Deceased was found buried beneath coal that had fallen from the corner of a pillar in some old workings. It is surmised that he entered to get some easy coal as his pick was lying by his side. The fall was 7' 10" high by 4½' wide by 2' thick. Inspection and inquiry made.
49	20th August, 10 A.M.	Bhalgora Mine, Jharis P. O.	Bhalgora Coal Co., Ltd.	Jagu Bhuia, (m.), 50, Miner.	Coal .	Deceased left his working place and commenced to dress back the corner of a pillar with the object of getting some easy coal to complete the loading of his tub. After a few blows from his pick, coal 7' high by 3' wide by 1½' thick, fell from the corner and broke his thigh. He died from shock 17 hours later. Inspection and inquiry made.
50	1st September, 4 P.M.	Dobari Mine, Jharis P. O.	Dobari Coal Co.	Mangru Bhuia, (m.), 25, Miner. Helib Bhuia, (f.), 21, Coal-carrier.	Coal .	A miner and his wife were working in a temporarily disused part of a quarry when portion of the overburden, 18' long by 4½' high by 1½' thick, consisting of made ground, fell and buried them. Inspection and inquiry made.
51	26th September, 11-30 P.M.	Salanpur Mine, Sitarampur P. O.	Borra Coal Co., Ltd.	Sona Majhi, (m.), 26, Coal-cutter.	Coal .	Deceased went through a fence and was cutting coal from the side of a pillar when about three tons of coal fell on him and killed him on the spot. Inspection and inquiry made.
52	30th September, 2 P.M.	Kankani Mine, Sijua P. O.	Eastern Coal Co., Ltd.	Rudu Meah, (m.), 35, Coal-cutter.	Coal .	Deceased was one of three men who were unlawfully cutting floor coal in an old gallery 25 feet high where such work had been stopped a fortnight before owing to danger of a fall. About 20 tons of coal fell on him from the corner of a pillar and he received injuries from which he died the same day. There were no officials in the mine at the time. See Report, page 15. Inspection and inquiry made.
53	5th October, 11 A.M.	Sudamdih Mine, Bhujudih P. O.	Sudamdih Coal Co., Ltd.	Budhu Gori, (m.), 32, Coal-cutter.	Coal .	Deceased left his working place and began to cut coal from the corner of a pillar when a mass of about two tons of coal fell from the pillar and overwhelmed him. No marks of injury were found, and he is presumed to have died from the effects of suffocation and shock. A girl who was passing at the time was knocked down and severely injured about the head. Inspection and inquiry made.
54	25th October, 5 P.M.	Kurkend Mine, Kusunda P. O.	Central Kurkend Coal Co., Ltd.	Luki Turi, (m.), 22, Coal-carrier.	Coal .	Deceased was one of a gang of three men who were driving a length of 20 feet of a long continuous face of coal towards a boundary a few feet distant. The officials permitted them to undercut with the result that a mass of coal 18 feet long by 0 to 5 feet wide and 4 feet high, fell away from a smooth joint and killed him on the spot. The weight of the fallen coal was about seven tons. The other two men had just ceased work and gone home. Inspection and inquiry made.

APPENDIX II—contd.

Fatal Accidents, 1910—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—concl'd.</b>						
<b>Falls of sides—concl'd.</b>						
55	6th December, 3-45 P.M.	Shivrajpur Mine, Shivrajpur P. O.	Shivrajpur Syndicate, Ltd.	Chinda Raghla, (m.), 25, Sewa Narasingh, (m.), 23, Babar Namla, (m.), 20, Oondhia Joria, (m.), 14, Kania Chinda, (m.), 8, Roopla Dipla, (m.), 10, Rangli Bindle, (f.), 18, Hatia Mansingh, (m.), 22, Gullia Chimaria, (m.), 20, Viria Ramji, (m.), 30, Jania Lakada, (m.), 40, Jhingli, (f.), 20, <i>Coolies.</i>	Manganese	While twenty-seven persons were working at the bottom of a quarry a portion of the hanging wall collapsed. Eleven were killed outright and one died an hour later. In this part of the mine the hanging wall is intensely folded. <i>See Report, page 15.</i> Inspection and inquiry made.
56	14th December, 1-30 A.M.	Pottery Mine, Raniganj P. O.	Burn & Co., Ltd.	Chuni Baurin, (f.), 14, <i>Coal-carrier.</i>	Coal	Deceased entered a gallery just as a miner was wedging down a piece of coal. Although warned of the danger she failed to stand clear with the result that she sustained a compound fracture of her right leg and arm from the effects of which she died. <i>See Report, page 17.</i> Inspection and inquiry made.
<b>IN SHAFTS—(20 deaths).</b>						
<b>Overwinding—(2 deaths).</b>						
57	18th June, 12 Noon.	Raghnathbati, Sitarampur P. O.	Sudhi Coal Co., Ltd.	Duli Baurini, (f.), 12, Sumi Baurini, (f.), 16, <i>Water-bailers.</i>	Coal	During the temporary absence of the winding engineman the boiler fireman, without authority, raised from the bottom of the shaft a cage in which were the two deceased. He overwound and, there being no detaching hook, the cage struck the cross beams in the head gear, and the rope broke. The cage fell 305 feet to the bottom and the women were killed on the spot. Inspection and inquiry made.
<b>Whilst ascending and descending by machinery—(3 deaths).</b>						
58	28th January, 10-30 A.M.	Pottery Mine, Raniganj P. O.	Burn & Co., Ltd.	Jangli Kori, (m.), 40, <i>Coal-cutter.</i>	Coal	Deceased was being raised up a shaft 109 feet in depth by a gang of women hauling a rope when he let go the rope and fell to the bottom. He was killed on the spot. Inspection and inquiry made.
59	6th June, 12-30 P.M.	New Damra Mine, Kalipahari P. O.	Phularitand Coal Co., Ltd.	Nihal Shah, (m.), 25, <i>Shaft-sinking sirdar.</i>	Coal	Deceased lighted a round of 5 gun-powder shots at the bottom of the shaft and had been drawn up in the bucket for about 15 feet when one of the shots exploded. He was sitting on the rim of the bucket, and on being struck by flying rock fell to the bottom of the shaft. He was killed on the spot. Inspection and inquiry made.

60	1st October, 1-30 P.M.	Khaira Mine, Kurunda P. O.	East Indian Coal Co., Ltd.	Bindu Kole, (m.), 25, <i>Pump-khalassi.</i>	Coal	Deceased went down in the water bucket to see what depth of water there was in the shaft. A few minutes later he shouted to be drawn up. When the bucket had been raised about 20 feet the hook-man noticed the rope oscillating and shouted to the engineman, who stopped the engine. After waiting for some little time the bucket was slowly drawn to the surface. Bindu was found lying at the bottom of the bucket, having sustained injuries from which he died shortly after. The bucket probably collided with some girders in the shaft. Inspection and inquiry made.
<b>Falling into the shaft from the surface—(2 deaths).</b>						
61	6th February, 6-45 P.M.	Bejdih Mine, Sitarampur P. O.	Equitable Coal Co., Ltd.	Kedar Banri, (m.), 30, <i>Bankman.</i>	Coal	While carrying coal to mend the pit bank fire deceased caught his foot against a beam and stumbled forward into an unfenced sinking shaft 358 feet deep. His body was found in the sump. <i>See Report, page 17.</i> Inspection and inquiry made.
62	14th September, 4-30 P.M.	Gopalichak Mine, Jharia P. O.	Gopalichak Coal Co., Ltd.	Ananta Burhi, (m.), 35, <i>Fitter.</i>	Coal	Whilst lowering a small Tangye pump the coolies let go the handles. Deceased made a grab at the rope which was attached to the pump for steadying it and was dragged down the shaft.
<b>Falling from part of the way down—(7 deaths).</b>						
63	21st January, 3 P.M.	Bhutgoria Mine, Jharia P. O.	Aldih Coal Co., Ltd.	Sukia Gorain, (f.), 26, Neria Goalin, (f.), 36, Uday Mahato, (m.), 55. <i>Bailing coolies.</i>	Coal	While two men and four women were being lowered the cage was stopped as a tub had got into the sump. The three deceased took off the safety chain and walked out, thinking the cage had reached the pit bottom and fell down 81 feet. Neria and Uday died almost immediately and Sukia about a quarter of an hour later. Inspection and inquiry made.
64	29th August, 8-30 P.M.	North Anantapur Mine, Morrison P. O.	North Anantapur Gold Mines, Ltd.	Balapolunir Rodrigadu, (m.), 30, <i>Stuff-coolie.</i>	Gold	Deceased was climbing up a shaft on a ladder and fell when 17 feet from the bottom. Inquiry made.
65	4th October, 10-30 A.M.	Taroktan Mine, Mogok P. O.	Burma Ruby Mines, Ltd.	Moung San Win, (m.), 18, <i>Coolie.</i>	Rubies	Deceased was guiding a rope which was raising a pipe from a disused pump at the bottom of a shaft. The pipe caught the plank on which he was standing and shook him off. He failed to maintain his hold on the rope and fell down the shaft about 40 feet, dislocating his neck.
66	8th October, 8-30 P.M.	Sibpur Mine, Charanpur P. O.	Katras Jharia Coal Co., Ltd.	Meighu Kole, (m.), 25, <i>Miner.</i>	Coal	While descending a shaft 242 feet deep deceased fell out of the cage. It is surmised that the pick upon which he was leaning slipped and that he lost his balance. <i>See Report, page 17.</i> Inspection and inquiry made.
67	27th November, 4-30 P.M.	Borra Mine, Sitarampur P. O.	New Beerbhum Coal Co., Ltd.	Icha Muchi, (m.), 35, <i>Pump-khalassi.</i>	Coal	The edge of an ascending hoppit caught a suspended platform upon which deceased was repairing a pump in a sinking shaft and made it turn turtle, both he and the pump being precipitated into the sump 15 feet below. Although there was plenty of room in the shaft a clearance of 18" only had been allowed between the hoppit and the platform. Inspection and inquiry made.
<b>Things falling from the surface—(3 deaths).</b>						
68	17th June, 10-30 A.M.	Serampur Mine, Giridih P. O.	East Indian Railway Co.	Gondo Turi, (m.), 30, <i>Onsetter.</i>	Coal	A piece of coal became dislodged from a tub that was being withdrawn from a cage and, falling down the shaft, struck the deceased on the head causing fracture of the skull. <i>See Report, page 18.</i> Inspection and inquiry made.
69	28th September, 5-30 P.M.	Bhulanbarari Mine, Jharia P. O.	Bhulanbarari Coal Co., Ltd.	Uobitldeo, (m.), 20, <i>Bellman.</i>	Coal	A line misty had come up the shaft in a cage and on his reaching the surface a crowbar slipped out of his hand and fell down the shaft killing the onsetter at the shaft bottom.
70	28th October, 1 A.M.	Borra Mine, Sitarampur P. O.	New Beerbhum Coal Co., Ltd.	Gurra Majhi, (m.), 32, <i>Miner.</i>	Coal	A piece of coal became dislodged from a loaded tub, owing to the cage settling on the keps at the surface with a bump, and fell down the shaft, striking deceased on the head just as, contrary to orders, he was crossing over the sump boards at the shaft bottom. There was a space of 8" between the end of the cage and the edge of the pit bank. A sirdar was present at the shaft bottom. <i>See Report, page 18.</i> Inspection and inquiry made.

APPENDIX II—contd.

Fatal Accidents, 1910—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—contd.</b>						
<b>Things falling from part of the way down—(2 deaths).</b>						
71	28th February, 7-30 P.M.	Lutchipur Mine, Sitarampur P. O.	Lutchipur Coal Co., Ltd.	Jatu Majhi, (m.), 22, <i>Miner.</i> Chuna Majhi, (m.), 30, <i>Onsetter.</i>	Coal .	The authorized onsetter with a miner was descending to resume charge of the shaft bottom when a loaded tub fell from the ascending cage, a distance of 325 feet, upon the descending cage and killed the occupants outright. The tub had been put on the cage by a miner who failed to drop the suck-bar. Inspection and inquiry made.
<b>Miscellaneous—(1 death).</b>						
72	25th March, 11-30 P.M.	Sodepur Mine, Sitarampur P. O.	Bengal Coal Co., Ltd.	Nirmal Meah, (m.), 18, <i>Onsetter.</i>	Coal .	Deceased stepped upon the sump boards to pick up a lump of coal when a loaded cage, which had just been raised from the bottom of the shaft, was lowered again, crushing him to death. Inspection and inquiry made.
<b>BY EXPLOSIVES—(8 deaths).</b>						
73	11th February, 8 A.M.	Benabir Mine, Jharis P. O.	Standard Coal Co., Ltd.	Fagu Manjhi, (m.), 35, Porbut Manjhi, (m.), 28, Naika Manjhi, (m.), 30, <i>Coal cutters.</i> Sambhu Manjhi, (m.), 8.	Coal .	The men were making country powder into cartridges in their house round a fire, when, probably from a spark, the powder exploded, injuring the three deceased so that they all died, Porbut on the 13th, Sambhu on the 15th and Fagu on the 19th February. See Report, page 18. Inspection and inquiry made.
74	24th February, 4 P.M.	Sendra Mine, Bansjora P. O.	Sendra Coal Co., Ltd.	Haril Singh, (m.), 26, <i>Sinker.</i>	Coal .	Six shots had been put off at 10 A.M. Only five were heard to go off, but the airdar concluded that two had gone off together. As four sinkers including deceased, were removing the debris at 4 P.M., a cartridge lying in it exploded, injuring him so severely that he died the following evening. Inspection and inquiry made.
75	20th July, 8 P.M.	Balaghat Mine, Kampti P. O.	Central Provinces Prospecting Syndicate, Ltd.	Chidi Mahadeo, (m.), 28, <i>Ore-worker.</i>	Manganese .	Deceased was drilling in an old hole which had been exploded three days before. The hole was not a misfire. An explosion occurred causing a fracture of his left hand. Blood poisoning supervened and he died a few days later. Inspection and inquiry made.
76	15th September, 7 A.M.	Balaghat Mine, Kampti P. O.	Central Provinces Prospecting Syndicate, Ltd.	Lutaru, (m.), 20, <i>Coolie.</i>	Manganese .	While deceased and others were loading a trolley blasting became necessary. They took shelter under a straw hut. When the shot was fired a stone weighing 8½ seers was hurled through the air for 348 feet. It fell through the eye of the hut on to his head, fracturing it. Inspection and inquiry made.
77	25th November 4-30 P.M.	Shivrajpur Mine, Shivrajpur P. O.	Shivrajpur Syndicate, Ltd.	Chago Judha, (m.), 45, <i>Coolie.</i>	Manganese .	Contrary to orders deceased took shelter during blasting operations in a cutting lying at right angles to the blast and was struck by a piece of rock which cannoned off the opposite wall. His left arm and four ribs were broken from the effects of which he died the next morning.
<b>IRRUPTIONS OF WATER OR FALLING INTO WATER—(6 deaths).</b>						
78	26th October, 9 A.M.	Murulidih Mine, Mohuda P. O.	Bengal Coal Co., Ltd.	Punit Dhobi, (m.), 30, Gura Mahato Gowala, (m.), 30, Bhiku Meah, (m.), 20.	Coal .	They were drowned by an inrush of water consequent on the holing of a working gallery into an accumulation of water in galleries to the rise. See Report, page 18. Inspection and inquiry made.

All Meah, (m.), 18,  
Jauu Meah, (m.), 22,  
Chatur Meah, (m.), 18,  
Main gallery drivers.

HAULAGE—(16 deaths).

79	20th January, 11.30 A.M.	Nodiha Mine, Dishargarh P. O.	Nodiha Coal Co., Ltd.	Rabi Baurini, (f.), 45, Bailing kamin.	Coal .	While seven loaded tubs were being raised up the brow of an incline the link of a coupling chain opened at a defective weld and five of the tubs ran back, breaking the back-stay and striking the deceased who was standing at the end of a landing. She was killed instantly. See Report, page 19. Inspection and inquiry made.
80	21st January, 11 A.M.	Kusunda Mine, Kusunda P. O.	Kusunda and Nuyadi Col- lieries, Ltd.	Gadhbha, (f.), 35, Coal-carrier.	Coal .	The hookman had either omitted to couple the three front tubs of a set of six empty tubs to the back three, or had coupled them improperly, and when he pushed the set over the brow, the three tubs ran wild, injuring two women, including deceased, who were in the incline waiting for their tubs. She died sixteen days later. See Report, page 19. Inspection and inquiry made.
81	29th January, 10 A.M.	Baraboni Mine, Asansol P. O.	Bilbera Coal Co., Ltd.	Gotapi Baurini, (f.), 40, Coal-carrier.	Coal .	After the signal to draw away the set had been given deceased attempted to cross the line between the first and second tubs of the set. She was knocked down and received injuries from which she died a week later. See Report, page 20. Inspection and inquiry made.
82	4th February, 4.15 P.M.	Bhulanbarari Mine, Jharia P. O.	Bhulanbarari Coal Co., Ltd.	Nimchand Kabal, (m.), 24, Line-coolie.	Coal .	Two empty tubs were being lowered from an incline into a level. As they went over the points, the lower tub became detached from the upper tub and ran violently into the level, injuring deceased. He died that night. Inspection and inquiry made.
83	17th March, 3 P.M.	Gauzlatan Mine, Katrasgarh P. O.	New Manbhum Coal Co., Ltd.	Talu Bhori, (m.), 45, Trolleyman.	Coal .	As seven empty tubs were being lowered down an incline dipping 1 in 3, the hook attaching the tubs to the rope broke and the tubs ran wild, passing over deceased, who died from his injuries two hours later. Inspection and inquiry made.
84	19th April, 3 P.M.	Sitalpur Mine, Dishargarh P. O.	Bengal Coal Co., Ltd.	Parag Phasi, (m.), 30, Miner.	Coal .	Four empty tubs became detached from a set and ran wild down a haulage plane. They collided with two old tubs lying at the end of a landing behind which two miners, including deceased, on being warned of their danger, had taken refuge. Both men were seriously injured and deceased succumbed immediately on reaching the surface. Inspection and inquiry made.
85	17th May, 9.30 A.M.	Kila Ali Ehan Mine, Khost Colliery, Khost P. O.	North Western Railway	Hossain, (m.), 27, Outaller.	Coal .	Rather than wait for the riding tub, which was standing 180 feet below, to take him up to the surface, deceased preferred to climb the somewhat perilous ascent to the surface up a grade of 50°. Shortly afterwards he was picked up at the bottom of the drift suffering from concussion of the brain from the effects of which he died ten hours later. It is surmised that he lost his foothold. Inspection and inquiry made.
86	25th June, 12 Noon.	Sanctoria Mine, Dishargarh P. O.	Bengal Coal Co., Ltd.	Moula Bux, (m.), 38, Fitter's coolie.	Coal .	Owing to a storm deceased, without a light, took refuge in an incline. He was knocked over and killed by a tub which ran wild down the incline, having been blown over the brow by the storm. See Report, page 20. Inspection and inquiry made.
87	3rd July, 6.15 A.M.	Burra Dhemu Mine, Sitarampur P. O.	Burra Dhemu Coal Co., Ltd.	Sahaji Baurini, (f.), 45, Trammer.	Coal .	She was crushed by a tub which ran away owing to its not being properly spragged. Inspection and inquiry made.
88	7th July, 6 P.M.	Babisole Mine, Baktanagar P. O.	Bilbera Coal Co., Ltd.	Banshwar Bauri, (m.), 45, Trammer.	Coal .	Owing to the breaking of a spring a loaded tub ran wild down a grade of 1 in 20. Deceased was crushed between this tub and another tub which he was pushing at the time. He sustained internal injuries and died about an hour afterwards. Inspection and inquiry made.

APPENDIX II—contd.

Fatal Accidents, 1910—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—concl'd.</b>						
89	16th July, 9 A.M.	Jinagora Mine, Jharia P. O.	East Barari Coal Co.	Manju Rajwarin, (f.), 41, Coal-carrier.	Coal .	As a set of five empty tubs was being lowered, the ropes became detached and the tubs ran wild. Deceased and her husband had reached the end of the first landing to get one of the tubs as soon as they arrived. They were warned by the hookman that the tubs had broken loose, but before they could escape the tubs smashed into them, pinning the woman against the corner of a pillar and breaking the man's leg. Inspection and inquiry made.
90	25th August, 7-30 A.M.	Gopalichak Mine, Jharia P. O.	Gopalichak Coal Co., Ltd.	Abdul Meah, (m.), 30, Pump-khalassi.	Coal .	Deceased was riding between the tubs contrary to orders when the haulage rope broke. The drag acted and threw the tubs off the rails. On jumping off he got caught between the side and one of the tubs.
91	29th September, 7 A.M.	Tirak Mine, Margherita P. O.	Assam Railways and Trading Co., Ltd.	Mllap, (m.), 37, Gunjra, (f.), 26, Tub-pushers.	Coal .	Deceased were riding on the ninth tub of a workman's train of 25 tubs. The tub they were in was derailed and knocked out two settings. This caused a fall of coal from the roof which fell on them. They were killed on the spot. Inquiry made.
92	29th September, 4 P.M.	Barkul Mine, Pench Valley P. O.	Pench Valley Coal Co., Ltd.	Ajudia Prosad, (m.), 22, Miner.	Coal .	Deceased was standing at the bottom of an incline when a tub which had run wild from the surface struck him and killed him.
93	30th September, 2 A.M.	Sitalpur Mine, Dishargarh P. O.	Bengal Coal Co., Ltd.	Bhuji Baurini, (f.), 17 Rail kamia.	Coal .	Owing to the slipping of a haulage clip two tubs ran wild down a grade on an endless rope haulage plane. By some means deceased got in front of the tubs and was killed. Inspection and inquiry made.
<b>BY UNDERGROUND MACHINERY—(1 death.)</b>						
94	18th July, 1-30 P.M.	Chowraai Mine, Dishargarh P. O.	Equitable Coal Co., Ltd.	Nital Bauri, (m.), 20, Pump attendant.	Coal .	Deceased was in charge of an electrically driven three-throw pump, and, whilst leaning over to screw down a lubricator, his clothing got caught by a stud on a countershaft. He was carried round the shaft, sustaining injuries from which he died a few hours later. Inspection and inquiry made.
<b>SUNDRIES UNDERGROUND—(8 deaths.)</b>						
95	18th January, 2-30 P.M.	Mayo Mine, Khewra P. O.	Government of India	Nek Bibi, (f.), 65, Carrier.	Salt .	Deceased fell, whilst carrying marl weighing 41 seers, and received injuries which proved fatal. What exactly occurred is not known as she was dead when found.
96	11th February, 8 A.M.	Khoet Mine, Khoet P. O.	North Western Railway	Naku, (m.), 28, Miner.	Coal .	Deceased was climbing a stenton rising at an angle of 57° by the aid of a rope attached to a winch roll fitted with a pawl and ratchet. Just as he was about to land at the level above, the pawl became disengaged, the rope paid out and he fell to the bottom of the stenton 100 feet below. He sustained an injury to the brain from the effects of which he died a fortnight later. Inspection and inquiry made.
97	31st March, 1 P.M.	Khoet Mine, Khoet P. O.	North Western Railway	Musafir, (m.), 26, Miner.	Coal .	As deceased was trying to remove an obstruction in a coal shoot placed at an angle of 53° in a low stenton, one of the sections buckled and nipped his leg against the roof causing fracture above and below the knee. It took three hours' work to effect his release. He died from collapse early the next morning. Inspection and inquiry made.



98	14th April, 2 P.M.	Charanpur Mine, Charanpur P. O.	Apcar & Co.	Parson Lodh, (m.), 24, Miner.	Coal .	While cutting roof coal from a stool deceased lost his foothold and fell a distance of 9 feet. He managed to walk home, but succumbed shortly afterwards to compression of the brain. Inspection and inquiry made.
99	24th June, 2 P.M.	Jamadoba Mine, Jharia P. O.	Indian Collieries Syndi- cate, Ltd.	Bir Singh Kahar, (m.), 25, Tindal sirdar.	Coal .	While in the act of unloading a pump from two trollies by means of a lever, using a sleeper as a fulcrum, the latter turned over and allowed the pump to fall heavily half on the trollies and half on a cog placed to receive it with the result that it cant- ed over and struck deceased a terrific blow on the chest. Death was practically instantaneous. Inspection and inquiry made.
100	3rd July, 8 A.M.	Upper Ledo Mine, Margherita P. O.	Assam Railways and Trad- ing Co., Ltd.	Muriah Gore, (m.), 30, Coolie.	Coal .	Deceased was cleaning out a water course by the side of a tram line and slipped in the way of a full tub which was being pushed out. He was crushed between the tub and the side. Inquiry made.
101	23rd August, 4 A.M.	Dandot Mine, Dandot P. O.	North Western Railway .	Futteh Mahomed, (m.), 15, Coolie.	Coal .	A jamb slipped out from a tub which was on a slope and the tub ran over the boy's leg, fracturing it. He died from its effects on the 25th August.
102	31st December, 5 P.M.	Shampur Mine, Nirshachati P. O.	Shampur Coal Company, Ltd.	Somenia Bauri, (f.), 32, Loading coolie.	Coal .	Deceased was attempting to cross a level tram line underground when she was knocked down by an approaching tub which was being pushed by two men. She sustained severe flesh wounds on her right leg and died a month later. Inspection and inquiry made.
ABOVE GROUND.						
By Surface Machinery—(1 death).						
103	21st November, 2 A.M.	North Anantapur Mine, Morrison P. O.	North Anantapur Gold Mines, Ltd.	Madhowan Nair, (m.), 18, Mill-oiler.	Gold .	Deceased went to oil some machinery with a blanket round him. The blanket evidently was caught by the clutch of a belt wheel and he was drawn in and crushed. When found he was dead. Inspection and inquiry made.
On surface railways and tramways belonging to the Mine—(8 deaths).						
104	5th January, 8-30 P.M.	Madhubpur Mine, Baktanagar P. O.	Imperial Coal Co., Ltd.	Govinda Chandra Mitra, (m.), 37, Gomasta.	Coal .	Deceased was riding on the foot-plate of a colliery locomotive when it derailed and over- turned. He was pinned beneath it and sustained injuries which resulted in death within a few hours. Inspection and inquiry made.
1105	21st January, 1 P.M.	Satpukuria Mine, Asansol P. O.	Satpukuria and Asansol Collieries, Ltd.	Umed Akuria, (m.), 30, Locomotive fireman.	Coal .	Deceased was riding on the front of a colliery locomotive when it derailed and overturned. His foot was severely cut and he died a week later from blood poisoning. Inspec- tion and inquiry made.
106	3rd February, 2 P.M.	Satpukuria Mine, Asansol P. O.	Satpukuria and Asansol Collieries, Ltd.	Kalpo Ankuria, (m.), 32, Locomotive fireman.	Coal .	Whilst a colliery locomotive was running reversed deceased was shovelling coal into the fire box, when he slipped and fell through the guard rail on to the line. He was caught by the cow-catcher and killed on the spot. Inspection and inquiry made.
107	12th March, 9-30 A.M.	Chasnalla Mine, Bhujudih P. O.	Lodna Colliery Co., Ltd.	Amir Meah, (m.), 30, Haulage engine khalassi.	Coal .	Deceased was illegally riding upon a train of full tubs, drawn by a colliery locomotive, when the tubs, and ultimately the locomotive, became derailed owing to excessive speed. He was caught between the tubs and crushed so severely that he died the following day. Inspection and inquiry made.
108	30th May, 9 A.M.	Kandri Mine, Kampti P. O.	Central Provinces Prospecting Syndicate, Ltd.	Panna, (m.), 40, Coolie.	Manganese .	The brakeman lost control of the brake on a self-acting incline owing to its jamming. The upcoming empty wagon was overwound and caught one of the hookers, killing him instantaneously. Inspection and inquiry made.
109	20th June, 10 A.M.	Mansar Mine, Kampti P. O.	Central Provinces Pros- pecting Syndicate, Ltd.	Bari, (f.), 35, Loader.	Manganese .	Deceased was knocked down by a full tub and received severe injuries. Blood poisoning supervened and she died on the 30th June.
110	4th November, 9 A.M.	Angarpatra Mine, Katrassgarh P. O.	Union Coal Co., Ltd.	Gaya Kurmi, (m.), 28, Locomotive fireman. Lazar Ali Meah, (m.), 25, Hookman.	Coal .	During the temporary absence of the driver Gaya Kurmi started a colliery locomotive against orders. After going a short distance down a slight grade the locomotive got out of control and one of the six tubs, which it was pushing, derailed. This led to the derailment of the locomotive and it fell over a small bridge. The injector pipe burst and the two men in the cab were severely scalded. Gaya Kurmi was dead when removed from the cab, but Lazar Ali lived for two days afterwards. Inspection and inquiry made.

APPENDIX II—contd.

Fatal Accidents, 1910—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—concl'd.</b>							
<b>Miscellaneous on surface—(7 deaths).</b>							
111	3rd January, 4-30 P.M.	Bhuskajuri Mine, Asansol P. O.	Bhuskajuri Coal Co., Ltd.	Ragi Turi, (f.), 13, Water-bailer.	Coal .	Deceased went to draw water from a prohibited well and, falling in, was drowned. Inspection and inquiry made.	
112	20th January, 10-45 A.M.	Serampur Mine, Giridih P. O.	East Indian Railway Co.	Kripa Dasadh, (m.), 30, Coolie.	Coal .	Some coolies were overturning a heavy and unwieldy casting by means of a long prop when the casting suddenly overbalanced. The prop was jerked out of the hands of the coolies and struck deceased, who was stationed on the other side of the casting, on the head, killing him on the spot. Inspection and inquiry made.	
113	26th February, 7 A.M.	Loyahad Mine, Bansjora P. O.	Barakar Coal Co., Ltd.	Bugi Tamalli, (m.), 28, Underground roadman.	Coal .	Deceased and two others were removing rollahs, 18 feet to 30 feet in length, from a large piled stack in the yard, when, owing to taking most of the rollahs from one side, the pile overbalanced, fell upon him and killed him. Inspection and inquiry made.	
114	7th April, 8 A.M.	Diabargah Mine, Diabargah P. O.	Equitable Coal Co., Ltd.	Santhu Baurin, (f.), 25, Coal-carrier.	Coal .	Deceased was found drowned in a boiler feed water tank. As she was subject to epileptic fits it is surmised that a sudden attack rendered her helpless while she was bathing. Inspection and inquiry made.	
115	1st August, 5-45 P.M.	Loyahad Mine, Bansjora P. O.	Barakar Coal Co., Ltd.	Punia Pasin, (f.), 30, Wagon loader.	Coal .	Deceased was drowned in a well used for drinking purpose.	
116	30th September, 10-30 A.M.	Sodepur Mine, Sitarampur P. O.	Bengal Coal Co., Ltd.	Shawan Barwala, (m.), 32, Labourer.	Coal .	Deceased was killed by a fall of a portion of a gantry which was being dismantled. Inspection and inquiry made.	
117	11th December, 2-30 P.M.	Aldih Mine, Sitarampur P. O.	Aldih Coal Co., Ltd.	Abdul Rahman, (m.), 30, Coolie.	Coal .	While a rope conductor was being lowered in a shaft 560 feet deep the chain lashing it to the cage broke and it ran down the shaft. Before two of the men assisting could stand clear the end of the conductor whipped them on the legs. Septicæmia set in and deceased died from the effects eight days later. Inspection and inquiry made.	
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—(30 deaths).</b>							
1	2nd January, 6 A.M.	Serampur Mine, Giridih P. O.	East Indian Railway Co.	Lachu Meah, (m.), 80	Coal .	Not employed	It is surmised that deceased was washing himself when he fell backwards into the water and, being an old man, was unable to get out again. The tank was completely enclosed and its use forbidden. Inspection and inquiry made.
2	15th January, 4-30 P.M.	Shivrajpur Mine, Shivrajpur P. O.	Shivrajpur Syndicate, Ltd.	Lumba Girdhari, (f.), 8.	Manganese .	Not employed	Deceased was with her mother taking shelter during blasting operations when a small piece of rock projected from a shot struck her on the head and killed her instantly. Inspection and inquiry made.

3	23rd January, 10-15 A.M.	Jogta Mine, Sijua P. O.	Agabeg Brothers	Dulmhi Kotri, (f.), 65, Cow-keeper.	Coal	Not employed on the mine.	Deceased was crossing the siding with a cow. She was knocked down by a locomotive and full train as it was leaving the siding and was killed on the spot. Inspection and inquiry made.
4	9th February, 6-30 A.M.	Awlayheri Camp near Balaghat Mine, Kampti P. O.	Central Provinces Pros- pecting Syndicate, Ltd.	Halki, (f.), 24, Coolie.	Manganese	Not a mine accident.	Deceased fell into a well while drawing water and was drowned. She was subject to epileptic fits.
6	12th February, 4 P.M.	Kusunda Mine, Kusunda, P. O.	Kusunda and Nayadi Collieries, Ltd.	? (m.), 1.	Coal	Not employed	As six loaded tubs were being drawn up through a cross measure drift, a coupling broke and four tubs ran wild, killing the child who was being carried by his sister aged eight years. See Report, page 20. Inspection and inquiry made.
6	16th February, 8-30 A.M.	Serampur Mine, Giridih P. O.	East Indian Railway Co.	Jadu Bauri, (m.), 21.	Coal	Not employed	Deceased was found on a broad gauge line, his head being completely covered from his body. From the disposition of the body and the absence of other injuries it is surmised that he committed suicide on account of recent total loss of eyesight. Inspection and inquiry made.
7	19th February, 12 Midnight.	Lakshminganj Mine, Chora P. O.	Lakshminganj Coal Co., Ltd.	Rakhal Bauri, (m.), 10.	Coal	Not employed	Deceased went to drink water from an abandoned shaft and, falling in, was drowned. Inspection and inquiry made.
8	Probably 24th February, 1-30 P.M.	Jamadoba Mine, Jharia P. O.	Indian Collieries Syndi- cate, Ltd.	Gufuran Bibi, (f.), 25, Loader.	Coal	Not a mine accident.	The body of deceased was found floating in a well by a woman who went to draw water. She had probably been in the water four days. Inspection and inquiry made.
9	23rd April, 1-30 P.M.	Rajhara Mine, Rajhara P. O.	Bengal Coal Co., Ltd.	Kabutri Burhi, (f.), 4.	Coal	Not employed	Deceased, following some distance behind its mother who had crossed a narrow-gauge line in front of a locomotive attached to a set of wagons, attempted to crawl under one of the wagons while the set was in motion and was cut in two. Inspection and inquiry made.
10	3rd May, 1 P.M.	Dobari Mine, Jharia P. O.	R. N. Bagchi	Bishu Bhatra, (m.), 5.	Coal	Not employed	Deceased, 5 years of age, playing near the line, fell or jumped on the rail as shunting operations were in progress and was crushed to death. Inspection and inquiry made.
11	6th May, 11 A.M.	New Surataur Mine, Jharia P. O.	J. L. Banerji & Co.	Bidua Dasadhin, (f.), 15.	Coal	Not employed	The body of deceased was found floating on the water in an excavation made on the surface 8 feet deep. As there were no marks of violence on her body it is surmised that she met her death by simple drowning. Inspection and inquiry made.
12	19th May, 12 Noon.	Bhulanbarari Mine, Jharia P. O.	Bhulanbarari Coal Co., Ltd.	Bhato Gope, (m.), 21, Trolleyman.	Coal	On railway line.	While crossing a siding during shunting operations deceased was knocked down by an empty wagon and severely crushed. He died a few hours later. Inspection and inquiry made.
13	23rd May, 11-30 A.M.	Bhaganband Mine, Jharia P. O.	Borrea Coal Co., Ltd.	Pheranji Mushahir, (m.), 11.	Coal	Not employed	Deceased must have deliberately climbed the enclosing wall of a boiler feed water tank to bath and, being unable to scale the wall from the inside, was drowned. There were no marks of violence on the body. Inspection and inquiry made.
14	26th May, 1 P.M.	Srikistapur Mine, Kalipahari P. O.	Baliram Coal Co.	Laki Majhain, (f.), 7 Durji Majhain, (f.), 7.	Coal	Not employed	Deceased were drowned whilst bathing in a boiler feed water tank. Inspection and inquiry made.
15	28th May, 5 P.M.	Warigaon Mine, Kampti P. O.	Central India Mining Co., Ltd.	Jama, (f.), 20, Coolie. Kakisa, (f.), 1½.	Manganese	Not a mine accident.	While cooking, the woman's clothes caught fire and, in attempting to get out of her hut, the flames spread to the hut and to the child who was sleeping in a cradle at the time.

APPENDIX II—contd.

Fatal Accidents, 1910—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—concl'd.</b>							
16	5th June, 2-30 P.M.	Brahmanbarari Mine, Jharia P. O.	East Indian Coal Co., Ltd.	Morni Bhushin, (f.), 30. Loader.	Coal . . .	On railway line.	During a storm a number of persons, amongst whom was deceased, took shelter under a wagon, deceased sitting on a rail with her back to a wheel. Suddenly a gust of wind caught a detached wagon, stationed 30 feet away, and drove it with considerable force into the wagon under which the people were sheltering and crushed her so severely that she succumbed shortly afterwards. Inspection and inquiry made.
17	17th June, 10 A.M.	Gopalichak Mine, Jharia P. O.	Gopalichak Coal Co., Ltd.	Sanpotia Shah, (f.), 9.	Coal . . .	Not employed	Deceased fell, unseen by any body, into an unprotected well and was drowned. As a bucket was subsequently found at the bottom of the well it is presumed that she went to draw water and missed her footing. Inspection and inquiry made.
18	3rd July, 12-30 P.M.	Sendra Mine, Bansjora P. O.	Sendra Coal Co., Ltd.	Pankhi Bhuis, (f.), 8.	Coal . . .	Not employed	Deceased strayed upon the line while shunting operations were in progress on a colliery siding and was run over by a wagon. Inspection and inquiry made.
19	12th July, About midday.	Jamuria Mine, Nandi P. O.	Equitable Coal Co., Ltd.	Chowri Koiri, (f.), 24.	Coal . . .	Not employed	Deceased was drowned in a boiler feed water tank where presumably she was bathing. Inspection and inquiry made.
20	13th July, 5-15 P.M.	Baraboni Mine, Charanpur P. O.	Ghusik and Muslia Collieries, Ltd.	Hari Bauri, (m.), 9.	Coal . . .	Not employed	Deceased was drowned in a well, which was properly fenced. Inspection and inquiry made.
21	15th July, 3 P.M.	Jamadoba Mine, Jharia P. O.	Indian Collieries Syndicate, Ltd.	Hasa Roy, (m.), 6.	Coal . . .	Not employed	Deceased was travelling along an endless rope haulage road in company with his grown up brother who had a baby in his arms, when he trod upon the moving rope and was thrown to the ground. Before the rope could be stopped a haulage clip attached by a chain to a loaded tub struck him a violent blow on the chest causing complicated fracture of the ribs. Inspection and inquiry made.
22	26th August, 9 A.M.	New Khas Jharia Mine, Jharia P. O.	R. J. Agarwala . . .	Setola Chamarin, (f.), 16, Coolie.	Coal . . .	Suicide . . .	After a quarrel with her husband deceased went to an old shaft full of water and jumped in. Inspection and inquiry made.
23	30th September, 1-30 P.M.	Miragpur Mine, Kampti P. O.	Central India Mining Co., Ltd.	Mathola, (f.), 1.	Manganese . . .	Not employed	Deceased's mother was cleaning ore when the child wandered about 5 feet away and fell into a small pool 2 feet deep which was half full of water owing to the previous day's rain. The father seeing the child in the water rescued it immediately. It was then taken to the camp where it expired at 2-30 P.M.
24	1st October, 8-30 A.M.	Sijua Mine, Sijua P. O.	Sijua Coal Co., Ltd.	Somra Hari, (m.), 10, Stone-picker.	Coal . . .	On railway line.	Deceased was run over by a train of coal wagons during shunting operations on the colliery siding. He received injuries to which he succumbed within a few hours. Inspection and inquiry made.

25	5th October, 1 A.M.	Napara Mine, Asansol P. O.	British Indian Coal Co., Ld.	Churna Beldar, (m.), 5.	Coal .	Not employed	Deceased was returning home in the twilight when he fell into a feed water tank containing 4' 9" of water but was rescued before life was extinct. Artificial respiration was tried vigorously for half an hour without avail. The top of the retaining wall was only 6" to 18" above the level of the ground. <i>See Report, page 20.</i> Inspection and inquiry made.
26	7th October, 10 A.M.	Jamuria Mine, Nandi P. O.	Equitable Coal Co., Ld.	Sukaldeo Choubey, (m.), 20, <i>Chaprassi.</i>	Coal .	On railway line.	Deceased was injured by a train of empty wagons which was being backed into the siding as he was crossing the line at a recognised pathway. Rain was falling heavily at the time and it is surmised that a damaged umbrella which was found close by contributed to the accident. Inspection and inquiry made.
27	27th October, 6 P.M.	Sibpur Mine, Charanpur P. O.	Katras Jharis Coal Co., Ld.	Dhoni Majhain, (f.), 35, <i>Loading woman.</i> Mongal Majhain, (f.), 1½.	Coal .	Murder and suicide.	A mother threw her baby and then herself into some water that had collected in an old incline cutting and both were drowned. Inspection and inquiry made.

## APPENDIX II—contd.

Table No. 2.

Statement of fatal and serious accidents in and about the mines regulated by the Indian Mines Act, 1901, during the year 1910.

PROVINCE.	District and mineral field.	Total average number of persons employed daily.	FATAL ACCIDENTS.			SERIOUS ACCIDENTS.			DEATH-RATE TO 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 ground and above
				Below ground.	Above ground.		Total deaths.	Below ground.			
<b>A.—COAL.</b>											
Bengal . . . . .	Hazaribagh { Bokaro-Ramgarh . . . . .	95	..	..	..	..	..	..	..	..	..
		52	..	..	..	..	..	..	..	..	..
		6,762	2	1	1	2	3	2	1	3	24
		50,978	34	45	5	50	33	21	12	33	141
		5,201	31	32	3	55	4	1	3	4	1491
		38	..	..	..	..	..	..	..	..	..
		22	..	..	..	..	..	..	..	..	..
		34,262	16	18	4	17	17	13	4	17	57
		15	..	..	..	..	..	..	..	..	..
		29	..	..	..	..	..	..	..	..	..
	597	..	..	..	..	2	2	..	2	..	
	214	..	..	..	..	..	..	..	..	..	
	TOTAL	98,268	83	111	18	124	59	39	20	59	177
Central Provinces	Chhindwara, Pench Valley . . . . .	765	2	2	..	2	1	1	..	1	3.08
	Narsinghpur, Mohpani . . . . .	966	..	..	..	..	1	1	..	1	..
	Chanda, Ballarpur . . . . .	688	..	..	..	..	1	1	..	1	..
	TOTAL	2,419	2	2	..	2	3	3	..	3	1.18
Panjab . . . . .	Jhelum . . . . .	1,224	3	3	..	3	3	2	1	3	3.98
	Shahpur . . . . .	402	..	..	..	..	..	..	..	..	..
	Mianwali . . . . .	156	..	..	..	..	..	..	..	..	..
	TOTAL	1,782	3	3	..	3	3	2	1	3	2.57
Eastern Bengal and Assam.	Lakhimpur . . . . .	1,911	12	27	..	27	3	3	..	3	22.46
Baluchistan . . . . .	Sibi, Khost, etc. . . . .	891	4	4	..	4	6	5	1	6	7.07
	Loralai, Loralai . . . . .	9	..	..	..	..	..	..	..	..	..
	TOTAL	900	4	4	..	4	6	5	1	6	6.00
North-West Frontier Province.	Hazara . . . . .	5	..	..	..	..	..	..	..	..	..
GRAND TOTAL (COAL)		105,285	140	147	13	160	74	52	22	74	2.13
<b>B.—MICA.</b>											
Bengal . . . . .	Monghyr . . . . .	300	..	3	..	3	..	5	..	5	59
	Hazaribagh . . . . .	9,053	2	..	..	..	4	..	..	..	..
	Gaya . . . . .	1,233	..	..	..	..	..	..	..	..	..
	TOTAL	10,581	2	3	..	3	4	5	..	5	40
Madras . . . . .	Nellore . . . . .	2,720	1	2	..	2	2	4	..	4	1.13
Rajputana . . . . .	Ajmer-Merwara . . . . .	200	..	..	..	..	..	..	..	..	..
GRAND TOTAL (MICA)		13,501	3	5	..	5	6	9	..	9	63

## APPENDIX II—contd.

Table No. 2—contd.

Statement of fatal and serious accidents in and about the mines regulated by the Indian Mines Act, 1901, during the year 1910.

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 ground and above ground.
				Below ground.	Above ground.		Total deaths.	Below ground.			
<b>C.—MANGANESE.</b>											
Central Provinces	Nagpur	3,483	2	2	2	3	3	3	...	3.05	57
	Bhaodara	1,581	...	...	...	...	...	...	...	...	...
	Balaghat	2,459	2	2	2	1	1	1	...	...	81
	Chhindwara	566	...	...	...	...	...	...	...	...	...
	<b>TOTAL</b>	<b>8,089</b>	<b>4</b>	<b>2</b>	<b>2</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>36</b>	<b>77</b>	<b>48</b>
Madras	Vizagapatam	2,325	...	...	...	...	...	...	...	...	...
Bombay	Panch Mahals	853	2	13	13	4	3	1	4	38.69	1524
	Ratnagiri	80	...	...	...	...	...	...	...	—	...
	<b>GRAND TOTAL (MANGANESE)</b>	<b>11,347</b>	<b>6</b>	<b>15</b>	<b>2</b>	<b>17</b>	<b>8</b>	<b>5</b>	<b>8</b>	<b>1.97</b>	<b>53</b>
<b>D.—LIMESTONE.</b>											
Central Provinces	Jabalpur, Katni	2,420	...	...	...	...	...	...	...	...	...
Panjab	Hoshiarpur	90	...	...	...	...	...	...	...	...	...
	<b>GRAND TOTAL (LIMESTONE)</b>	<b>2,510</b>	...	...	...	...	...	...	...	...	...
<b>E.—SALT.</b>											
Panjab	Shahpur	72	1	1	1	...	...	...	...	18.88	18.88
	Jhelum	820	...	...	...	11	11	...	11	...	...
	Mianwali	66	...	...	...	...	...	...	...	...	...
	<b>GRAND TOTAL (SALT)</b>	<b>958</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>11</b>	<b>11</b>	<b>...</b>	<b>11</b>	<b>1.07</b>	<b>1.04</b>
<b>F.—GEMS.</b>											
Burma	Mogok (Rubies, etc.)	1,483	1	1	1	2	...	2	2	1.59	68
Madras	Kurnool (Diamonds)	39	...	...	...	...	...	...	...	...	...
	<b>GRAND TOTAL (GEMS)</b>	<b>1,502</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>...</b>	<b>2</b>	<b>2</b>	<b>1.56</b>	<b>66</b>
<b>G.—SLATE.</b>											
Bengal	Monghyr	170	...	...	...	1	1	...	1	...	...
Panjab	Kangra	275	...	...	...	...	...	...	...	...	...
	Gurgaon	172	...	...	...	1	...	1	1	...	...
	<b>TOTAL</b>	<b>447</b>	<b>...</b>	<b>...</b>	<b>...</b>	<b>1</b>	<b>...</b>	<b>1</b>	<b>1</b>	<b>...</b>	<b>...</b>
	<b>GRAND TOTAL (SLATE)</b>	<b>617</b>	<b>...</b>	<b>...</b>	<b>...</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>...</b>	<b>...</b>
<b>H.—GOLD.</b>											
Bombay	Dharwar	337	...	...	...	1	...	1	1	...	...
Madras	Anantapur	1,186	2	1	2	1	1	...	1	1.60	1.77
	<b>GRAND TOTAL (Gold)</b>	<b>1,523</b>	<b>2</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>1.57</b>	<b>1.12</b>

## APPENDIX II — contd.

Table No. 2—contd.

Statement of fatal and serious accidents in and about the mines regulated by the Indian Mines Act, 1901, during the year 1910.

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 ground and above.		
				Below ground.*	Above ground.		Total deaths.	Below ground.				Above ground.	Total number of persons injured.
Bengal	Singhbhum	641	...	...	...	...	...	...	...	...	...	...	
Central Provinces	Nagpur	93	...	...	...	...	...	...	...	...	...	...	
Madras	Salem	900	...	...	...	1	...	1	1	...	...	...	
Baluchistan	Quetta-Pishin	8	...	...	...	...	...	...	...	...	...	...	
Bengal	Singhbhum	2,840	...	...	...	...	...	...	...	...	...	...	
Central Provinces	Jabalpur	...	...	...	...	...	...	...	...	...	...	...	
Central Provinces	Jabalpur	112	...	...	...	...	...	...	...	...	...	...	
Burma	Mandalay	2,621	...	...	...	1	1	1	1	...	...	...	
Bengal	Hazaribagh	11	...	...	...	...	...	...	...	...	...	...	
Burma	Maliwan	60	...	...	...	...	...	...	...	...	...	...	
	<b>GRAND TOTAL (Tns)</b>	<b>71</b>	...	...	...	...	...	...	...	...	...	...	
Central Provinces	Jabalpur	110	...	...	...	...	...	...	...	...	...	...	
Madras	Kurnool	10	...	...	...	...	...	...	...	...	...	...	
	<b>GRAND TOTAL (STREATITE)</b>	<b>120</b>	...	...	...	...	...	...	...	...	...	...	
Madras	Visagapatam	81	...	...	...	...	...	...	...	...	...	...	
	<b>GRAND TOTAL (ALL MINERALS)</b>	<b>144,880</b>	<b>117</b>	<b>170</b>	<b>16</b>	<b>166</b>	<b>107</b>	<b>78</b>	<b>82</b>	<b>110</b>	<b>1.69</b>	<b>.29</b>	<b>1.29</b>

\* Figures included along with that of Limestone.



## APPENDIX II—contd.

Table No. 3.

Statement of fatal accidents in mines regulated by the Indian Mines Act, 1901, during the year 1910, classified according to the age and sex of the workers.

MINERAL.	PROVINCE AND MINERAL FIELD.	Number of separate fatal accidents.	NUMBER OF DEATHS.								TOTAL BELOW AND ABOVE GROUND.	
			BELOW GROUND.				ABOVE GROUND.					
			Adult males.	Adult females.	Children (under 12).	TOTAL.	Adult males.	Adult females.	Children (under 12).	TOTAL.		
COAL . . . . .	Baluchistan . . . . .	4	4	...	...	4	...	...	...	...	4	
	Bengal {	Daltonganj . . . . .	...	...	...	...	...	...	...	...	...	...
		Giridih . . . . .	2	1	...	...	1	1	...	...	1	2
		Jharia . . . . .	34	36	9	...	45	4	1	...	5	50
		Raniganj . . . . .	47	52	18	...	65	5	2	...	7	72
	TOTAL (BENGAL) . . . . .	83	89	22	...	111	10	3	...	13	124	
	Central Provinces . . . . .	2	1	1	...	2	...	...	...	...	2	
Eastern Bengal and Assam . . . . .	12	26	1	...	27	...	...	...	...	27		
Panjab . . . . .	3	3	...	...	3	...	...	...	...	3		
TOTAL COAL . . . . .	104	123	24	...	147	10	3	...	13	160		
MICA . . . . .	Bengal . . . . .	2	3	...	...	3	...	...	...	...	3	
	Madras . . . . .	1	2	...	...	2	...	...	...	...	2	
	TOTAL MICA . . . . .	3	5	...	...	5	...	...	...	...	5	
MANGANESE . . . . .	Central Provinces . . . . .	4	2	...	...	2	1	1	...	2	4	
	Bombay . . . . .	2	0	2	2	13	...	...	...	...	13	
	TOTAL MANGANESE . . . . .	6	11	2	2	15	1	1	...	2	17	
SALT . . . . .	Panjab . . . . .	1	...	1	...	1	...	...	...	...	1	
GRMS . . . . .	Burma . . . . .	1	1	...	...	1	...	...	...	...	1	
GOLD . . . . .	Madras . . . . .	2	1	...	...	1	1	...	...	1	2	
GRAND TOTAL, ALL MINERALS . . . . .		117	141	27	2	170	12	4	...	16	186	

APPENDIX II—*conold.*

Table No. 4.

Statement of fatal accidents in mines regulated by the Indian Mines Act, 1901, during the year 1910, classified according to cause of accident.

MINERAL WORKED.	Number of separate fatal accidents.	NUMBER OF PERSONS KILLED.											DEATH-RATE PER 1,000 PERSONS EMPLOYED.		
		Explosions of fire-damp.	Falls of roof.	Falls of side.	In shafts.	By explosives.	Suffocation by gases.	Irruptions of water or falling into water.	Haulage.	Miscellaneous below ground.	Surface.	Total deaths.	Below ground.	Above ground.	Below and above ground.
Coal . . .	104	27	51	10	18	5	...	6	16	8	13	160	2.18	.34	1.53
Mica . . .	3	...	1	4	...	...	...	...	...	...	...	5	.03	...	.37
Manganese . .	0	...	...	12	...	3	...	...	...	...	2	17	1.97	.53	1.5
Salt . . .	1	...	...	...	...	...	...	...	...	1	...	1	1.07	...	1.04
Gems . . .	1	...	...	...	1	...	...	...	...	...	...	1	1.56	..	.66
Gold . . .	2	...	...	...	1	...	...	...	...	...	1	2	1.57	1.12	1.31
Total 1910 . .	117	27	52	34	20	8	...	6	16	9	16	186	1.89	.29	1.29
Total preceding year.	126	6	31	26	30	5	...	8	16	10	25	152	1.40	.49	1.08
Difference . .	-9	+21	+21	+6	-10	+3	...	+3	...	-1	-9	+34	+.49	-.20	+ .21

## APPENDIX III.

## PROSECUTIONS UNDER MINES ACT.

Statement of Prosecutions instituted under the Indian Mines Act, 1901, during the year 1910.

PROVINCE.	District.	Number of prosecutions.	Number of persons prosecuted.	Number convicted.	REMARKS.
Bengal . . . . .	Hazaribagh . . . . .	1	1	1	
Do. . . . .	Manbhum . . . . .	1	1	1	
Do. . . . .	Do. . . . .	1	1	.....	

**APPENDIX IV.**  
**MISCELLANEOUS.**

**Statement No. 1.**

**List of Inspection Circles.**

No. 1 Circle.	No. 2 Circle.	No. 3 Circle.
<p>(a) All mines in the districts of Palamau, Gaya, Monghyr, Singhbhum, Darjeeling, Ranchi and Sambalpur, and all mines other than coal mines in the district of Hazaribagh, and all mines in the district of Manblum, 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.</p>	<p>(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 in each direction across the district, and all coal mines in the district of Hazaribagh.</p>	<p>(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 and Birbhum.</p>
<p>(b) All mines in Assam.</p>	<p>(b) All mines in Baluchistan.</p>	<p>(b) All mines in the Presidency of Bombay.</p>
<p>(c) All mines in Burma.</p>	<p>(c) All mines in the United Provinces.</p>	<p>(c) All mines in the Central Provinces.</p>
	<p>(d) All mines in the Panjab.</p>	
	<p>(e) All mines in Ajmer-Merwara.</p>	<p>(e) All mines in the Presidency of Madras.</p>

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.
Whitworth, Charles Stanley . . . . .	148	7th February 1910 . . . . .	2326	8th January 1904.
Webster, Gerald Cecil . . . . .	149	Ditto . . . . .	3034	1st July 1907.
Husband, Robert . . . . .	150	Ditto . . . . .	3325	24th February 1909.
Elphinstone, William Spencer . . . . .	151	30th March 1910 . . . . .	2581	28th April 1905.
Dufton, Frank . . . . .	152	12th September 1910 . . . . .	2756	27th February 1906.
Gibson, Ernest . . . . .	153	Ditto . . . . .	3495	30th October 1909.
Wilson, James . . . . .	154	Ditto . . . . .	3028	14th June 1907.

## SECOND CLASS.

Press, William G. . . . .	19	21st November 1910 . . . . .	6563	11th June 1908.
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(b) Certificates of service.

## FIRST CLASS.

NAME.	No. of certificate.	Date of certificate.	REMARKS.
Haloo, Ramji . . . . .	135	12th September 1910.	

(c) Certificate of competency.

## FIRST CLASS.

Ashcroft, Charles Edwin . . . . .	54	30th March 1910.
Dennis-Jones, Allan A. . . . .	55	Ditto.
Wilkinson, Ronald . . . . .	56	Ditto.

## SECOND CLASS.

Ghosh, Satyendra Nath . . . . .	53	30th March 1910.
Akone, J. P. . . . .	54	Ditto.
Johnston, John Munroe . . . . .	55	Ditto.
Wise, Thomas Louis George . . . . .	56	Ditto.
Bhattacharya, Bhaba Charan . . . . .	57	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 are attached to the Overseer Section of the Apprentice Department.

*General explanation.*—The Mining Classes are designed to afford theoretical training in the principles of mining generally, to prepare students for positions of responsibility in coal or metal mines, and in the case of students attending for instruction in coal mining, to qualify them to appear for the examinations of mine managers, as required by the Indian Mines Act, VIII of 1901.

The course at Sibpur for regular mining students will extend over four years. At the end of the second year the sub-overseer examination is held. The specialised instruction in mining at Sibpur is given in the third and fourth years of the college course, according to the attached syllabus, and the diploma examination takes place at the end of the fourth year.

The classes are open to both regular students and special students.

*Regular students*—Are those who have qualified for admission by passing 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 Scholarship 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.*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 rocks; 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, shaft 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; adit 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.*Statement No. 4—*concl.*

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.

## MINING INSTRUCTION IN BENGAL.

## RANIGANJ AND JHARIA COALFIELDS.

Lectures for session 1910-11 will be delivered throughout the session at the following centres :—

1. Lecture room near Sijua station on Mondays at 6-30 P.M.  
Lecturer—Mr. S. McMurtrie.
2. Lecture room near the Jharia Club on Tuesdays at 5-30 P.M.  
Lecturer—Mr. S. McMurtrie.
3. Lecture room at Messrs. Apcar and Company's Charanpur Colliery on Thursdays 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 about 25 lectures, will commence in November 1910. 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 fifty per cent. of the lectures.

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

The Mining 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.

\*Particulars of the Sibpur College Mining Classes and of the scholarships connected therewith may be obtained from the Principal.

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

## RANIGANJ DISTRICT.

*Dishargarh Centre.*

Mr. G. C. Leach (Chairman).  
" Geo. Miller.  
" F. Owen.  
" W. J. Rees.  
Babu M. N. Roy (Begunia).  
" H. P. Mukherji (Chota Dhemo).  
The Local Lecturer (Secretary).

*Charanpur Centre.*

Mr. G. C. Leach (Chairman).  
" R. Mitchell.  
" E. M. Patterson.  
" A. Russell.  
Babu Rajoni Prokash Chuckerbutti.  
" Surendra Nath Sarkar.  
The Local Lecturer (Secretary).

## JHARIA DISTRICT.

*Jharia Centre.*

The Chief Inspector of Mines (Chairman).  
Mr. J. J. Turnbull.  
" R. J. Browne.  
" A. S. Thomson.  
Babu Bhupati Mukherji.  
" Sita Nath Dutta.  
The Local Lecturer (Secretary).

*Sijua Centre.*

Mr. R. R. Simpson (Chairman).  
" A. Agabeg.  
" W. Hutton-Williams.  
" E. S. Bennertz.  
Babu Lalit Mohan Chowdhuri.  
The Local Lecturer (Secretary).

## APPENDIX IV—concl'd.

## Statement No. 5—concl'd.

## 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.

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

## FIRST YEAR COURSE.

*Geology.*—General structure of the crust of the earth: Definitions and 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.

*Exploration.*—Advantages of borings; driving through faults, washouts, dykes, etc.; methods of maintaining the direction and gradient of such drivages.

*Boring and Winning.*—Different systems of boring; choice of methods; cost of boring. Winning coal by inclines, adits, shafts, shafts and crosscut.

*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; lining the shafts and scaffolding; sinking pit banking arrangements, bowks, waterbarrels, bull chain and hook, etc. Special difficulties in sinking and how to deal with them.

*Opening out and methods of working.*—Shafts pillars; arching or supporting the pit bottom; quarrying; pillar and stall; double road stall; long wall.

*Thick coal.*—Methods of working in South Staffordshire and Warwickshire, in Upper Silesia and France; methods of working thick seams by long wall, by inclined slices, and by horizontal slices, also the Rabatage System.

*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.

*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.

*Ventilation.*—Natural and artificial methods; coursing the air; use of stoppings, brattices, doors, airbridges, regulators, etc.; measuring the quantity of air, use of thermometer, barometer, water-gauge, anemometer; the friction of air in mines and the elementary theory of splitting.

*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; firedamp detectors.

## SECOND YEAR COURSE.

*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.

*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, etc.; strength of pipes, methods of supporting, different types of joints.

*Hauling.*—Tramways, tubs and wagons; 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.

*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; Heap-steads; arrangement of roads around pit bank; simple screening and sizing.

*Transmission of power* by steam, compressed air, and electricity; discussing the relative merits of each system.

*Coke.*—Its production and composition; different types of ovens; recovery of by-products.

A. DU PRÉDENNING,

Supdt. of Industries and Inspector of Technical Education.

Department of Mines, India.

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**REPORT**

OF THE

**CHIEF INSPECTOR OF MINES IN INDIA**

Under the Indian Mines Act (VIII of 1901)

FOR THE

**YEAR ENDING 31st DECEMBER 1910**

BY

**G. F. ADAMS,**

*Chief Inspector of Mines in India*



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