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THE NATIONAL SAFETY COMPETITION OF 1929



BY

W. W. ADAMS

REPORTS OF INVESTIGATIONS

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THE NATIONAL SAFETY COMPETITION OF 1929¹

By W. W. Adams²

The fifth annual National Safety Competition conducted by the United States Bureau of Mines to determine the best safety records at mines and quarries during the calendar year 1929 has been concluded, and the general results of the contest are presented herewith. To the winner in each of the five groups into which the contestants were divided there has been awarded the bronze trophy 'Sentinels of Safety,' donated by the Explosives Engineer magazine. The trophy for bituminous coal mines was won by a mine in Alabama; that for metal mines by an iron-ore mine in Michigan; that for nonmetallic mineral mines by a salt mine in New York; that for quarries and open-cut mines went to a limestone quarry in Michigan; the trophy provided for anthracite mines was, of course, won by a mine in Pennsylvania, as all of the anthracite mines participating in the contest are situated in that State.

Winners of the trophies were selected by a committee of award in accordance with rules governing the contest and on the basis of accident records furnished by the various companies to the Bureau of Mines. These records were summarized by the bureau and the results submitted to the committee. Members of the committee are W. H. Cameron, managing director of the National Safety Council; William Green, president of the American Federation of Labor; James F. Callbreath, secretary of the American Mining Congress; T. T. Read, Vinton professor of mining of Columbia University and editor of 'Mining and Metallurgy'; C. B. Huntress, executive secretary of the National Coal Association; A. J. Curtis, assistant to the general manager of the Portland Cement Association; A. T. Goldbeck, director of the engineering bureau of the National Crushed Stone Association.

Thirty-four States were represented in the 1929 contest. Among the plants which participated were 68 bituminous coal mines, 29 anthracite mines, 54 metal mines, 19 nonmetallic mineral mines, all of the foregoing being underground mines, and 141 quarries or open-cut mines. A total of 106,533,006 man-hours of work was reported by all of the companies. Accidents during the year numbered 7,068 and represented a period of disability equal to 986,306 man-days. Hence the accident-severity rate for all plants combined represented 9.3 man-days of disability for each thousand man-hours of exposure to hazard. Similarly, the combined accident-frequency rate for all plants showed that 66.3 accidents occurred for every million man-hours of exposure to hazard. Both of these rates indicated an improvement over the combined rates for all plants in the previous year's contest. The reduction in the accident-severity rate centered chiefly

1 - The Bureau of Mines will welcome reprinting of this paper provided the following footnote acknowledgment is used: "Reprinted from U. S. Bureau of Mines Report of Investigations 3019."

2 - Supervising statistician, U. S. Bureau of Mines.

in the metal-mine group, though all except the quarry and open-cut mine group shared in the reduction; the improvement in the accident-frequency rate was in all groups except anthracite and metal, the rate for the former having increased while that of the latter remained unchanged.

Frequency and severity rates for the contest as a whole were not only lower than those for the previous year but were also lower than for 1927. Moreover, the accident-frequency rate for 1929 was lower than for any previous year, being 34 per cent less than for 1925, the year of the first National Safety Competition. Credit for this reduction belongs to all groups except anthracite. On the other hand, the accident-severity rates for all plants combined have not been as favorable during the past three years as they were in 1925 and 1926, owing chiefly to an increase in the severity rates for anthracite and bituminous mines.

Thirty-four States were represented in the National Safety Competition of 1929. These States were:

Alabama	Indiana	Massachusetts	New York	Utah
Arizona	Iowa	Michigan	New Mexico	Virginia
California	Kansas	Minnesota	Ohio	Washington
Colorado	Kentucky	Missouri	Oklahoma	West Virginia
Connecticut	Louisiana	Montana	Pennsylvania	Wisconsin
Florida	Maine	Nebraska	Tennessee	Wyoming
Illinois	Maryland	New Jersey	Texas	

The general scope of the competition is shown by the following figures. As previously indicated, the contest covered the accident records of 311 mines and quarries whose employees worked 106,533,006 man-hours during the year.

	Number of mines	Man hours	Injuries	Days of disability
Anthracite mines	29	31,098,493	3,152	328,541
Bituminous coal mines.	68	33,668,473	2,321	389,566
Metal mines	54	18,116,618	945	108,512
Nonmetallic mineral mines	19	3,897,004	121	30,374
Quarries and open-cut mines	141	19,752,418	529	129,313
Total, 1929	311	106,533,006	7,068	986,306
1928	284	91,746,707	6,109	900,182
1927	256	91,919,812	6,645	866,021
1926	256	95,055,815	7,313	799,493
1925	210	68,418,283	6,848	580,895

From these figures the following accident rates were calculated:

	Frequency rate	Severity rate
Anthracite mines	101.355	10.565
Bituminous coal mines	68.937	10.571
Metal mines	52.162	5.990
Nonmetallic mineral mines ...	31.049	7.794
Quarries and open-cut mines .	26.782	6.547
Average	66.346	9.258

The accident-frequency rates indicate the number of fatal, permanent, and temporary lost-time injuries for each million man-hours of exposure to hazard. The accident-severity rates indicate the number of days of disability caused by all fatal, permanent, and temporary lost-time injuries per thousand man-hours of exposure to hazard. A special charge is made against fatalities and permanent injuries, as is shown in Table 1.

A comparison of the accident rates for 1929 with those for the previous year shows that accidents at anthracite mines increased in frequency, owing to an increase in temporary injuries, but that the severity rate was reduced slightly, owing to a decline in fatalities and permanent partial disabilities. The rates for bituminous mines were reduced both as to frequency and severity in all classes of injuries except permanent total disabilities. Metal mines as a group accomplished no reduction in accident frequency but made a marked reduction in the accident-severity rate by lessening the number of fatalities, bringing about a reduction large enough to overcome increased severity rates for all classes of nonfatal injuries. Nonmetal mines effected a material reduction in accident frequency and a smaller reduction in accident severity; the improvement was especially notable in temporary injuries. The group which included quarries and open-cut mines reduced its accident-frequency rate but suffered an increase in its severity rate on account of an increase in fatalities and permanent partial disabilities, an increase which more than counterbalanced a reduction in the rate for temporary injuries.

Table 2 shows the frequency and severity rates during 1929 and previous years for each group of mines and for each class of injury. The figures cover all participating companies except in one instance where the record of a coal mine has been omitted because of the occurrence of a major explosion with a loss of life which, if included, would impair the comparability of the yearly accident rates.

Among the 311 mines and quarries that participated in the contest, 57 were operated without a lost-time accident. Several of these plants, however, fell below the requirements of the contest rules, either by being in operation less than 150 days or by having less than 50 men employed underground or 25 inside the quarry or open-cut mine. These plants thus became disqualified as formal contenders for the award of the trophy. However, figures for all mines and quarries are included in Tables 3 to 7. The 57 plants which operated without a lost-time accident in 1929 worked 7,344,219 man-hours, representing 7 per cent of the total number of man-hours worked by the 311 mines and quarries. In the group which included 141 quarries and open-cut mines, 46 plants worked 5,701,000 man-hours without a lost-time accident, representing 29 per cent of the total number of hours worked at the 141 plants in the group.

The trophy for the best safety record at anthracite mines in 1929 was won by Highland No. 6 mine, at Jeddo, Pa., operated by the Jeddo-Highland Coal Co. This mine worked 142,128 man-hours during the year; it had eight accidents which involved a total of 64 days of disability. The accident-severity rate was 0.450 per million hours, as compared with an average 10,565 for the entire anthracite group. The severity rate is the basis on which the trophy is awarded, in accordance with the rules governing the contest. The accident-frequency rate

for Highland No. 6 mine was 56.287 per thousand man-hours, as against an average rate of 101.355 for the group as a whole.

In the bituminous group the trophy was awarded to the Hull No. 33 mine at Dora, Ala., which was operated by the DeBardeleben Coal Corporation. The mine worked 264,656 man-hours in 1929 and had three employees injured who lost 21 days as a result of their injuries. Hence the mine's accident-severity rate was 0.079 and its frequency rate was 11.336 as compared with 11.571 and 68.937, respectively, for the entire group of bituminous coal mines.

The trophy for metal mines was won by the Berkshire iron-ore mine at Stanbaugh, Mich., operated by the Brule Mining Co. The Berkshire mine worked 345,695 man-hours without a lost-time accident during the year. Its accident rate was therefore zero. The combined accident-severity rate for all metal mines competing for the trophy was 5.990 and the combined frequency rate was 52.162, representing an exposure of 18,116,613 man-hours.

The trophy for nonmetallic mineral mines was awarded to the Retsof rock-salt mine of the Retsof Mining Co. at Retsof, N. Y. This mine worked 257,927 man-hours and had no lost-time accidents. This excellent record compares with the group's accident-severity rate of 7.794 and accident-frequency rate of 31.049, and a total of 3,897,004 man-hours of exposure.

The four classes of mines thus far referred to relate to underground mines. The fifth group for which a trophy was awarded included quarries and open-cut mines, regardless of the kind of mineral produced. The trophy for the best record in this group was won by the Michigan Limestone and Chemical Co.'s limestone quarry at Rogers City, Mich., which worked 753,156 man-hours during 1929 without a lost-time accident. All mines and quarries within the group worked 19,752,418 man-hours and had an accident-severity rate of 6.547 and an accident-frequency rate of 26.782.

The average duration of disability resulting from temporary injuries in 1929 was 21.6 days, as compared with 22.3 days in the previous year's contest. This average "healing period" varied from 27.5 days for bituminous coal mines to 18.1 days for anthracite mines and 18.2 for quarries and open-cut mines. Comparative figures showing the average length of disability from temporary injuries at mines and quarries of the National Safety Competition in 1928 and 1929 are as follows:

	<u>1928, days</u>	<u>1929, days</u>
Anthracite mines	20.7	18.1
Bituminous coal mines	26.2	27.5
Metal mines	17.7	20.9
Nonmetallic mineral mines	15.7	21.6
Quarries and open-cut mines ...	<u>20.0</u>	<u>18.2</u>
	22.3	21.6

Records of the National Safety Competition of 1929 confirm those of previous years which showed that most mining and quarrying companies have better safety records than are indicated by the average figures for all mines as a

group. For example, 88 per cent of the properties in the quarry and open-cut mine group in the safety contest of 1929 had accident-severity rates lower than 6.547, which was the average rate for the group. Sixty-six per cent of the properties in the same group had accident-frequency rates lower than 26.782, the average rate for the group. Similar percentage figures for each group showing the proportion of plants having better records than the group average, are given below.

	<u>Frequency rate</u>		<u>Severity rate</u>	
	<u>1928</u>	<u>1929</u>	<u>1928</u>	<u>1929</u>
Anthracite mines	45	59	55	66
Bituminous coal mines	62	60	62	72
Metal mines	60	56	75	78
Nonmetallic mineral mines ...	53	58	79	74
Quarries and open-cut mines .	68	66	87	88
Total	67	71	75	79

Tables 3 to 7, which follow, show the relative standing, according to their accident-severity rates, of the mines and quarries that participated in the National Safety Competition of 1929.

Table 1. SCALE OF TIME LOSSES FOR WEIGHTING DEATHS AND PERMANENT INJURIES SO AS TO SHOW SEVERITY OF ACCIDENTS.

Nature of injury	Degree of disability in per cent of permanent total disability	Days lost
Death	100	6,000
Permanent total disability	100	6,000
Arm above elbow, dismemberment, or permanent disability of	75	4,500
Arm at or below elbow, dismemberment, or permanent disability of	60	3,600
Hand, dismemberment, or permanent disability of	50	3,000
Thumb, any permanent disability of	10	600
Any 1 finger, any permanent disability of	5	300
2 fingers, any permanent disability of	12½	750
3 fingers, any permanent disability of	20	1,200
4 fingers, any permanent disability of	30	1,800
Thumb and 1 finger, any permanent disability of	20	1,200
Thumb and 2 fingers, any permanent disability of	25	1,500
Thumb and 3 fingers, any permanent disability of	33½	2,000
Thumb and 4 fingers, any permanent disability of	40	2,400
Leg above knee, dismemberment, or permanent disability of	75	4,500
Leg at or below knee, dismemberment, or permanent disability of	50	3,000
Foot, dismemberment, or permanent disability of	40	2,400
Great toe, or any 2 or more toes, any permanent disability of	5	300
1 toe, other than great toe, any permanent disability of	0	
1 eye, loss of sight	30	1,800
Both eyes, loss of sight	100	6,000
1 ear, loss of hearing	10	600
Both ears, loss of hearing	50	3,000

Temporary disabilities are weighted according to actual number of calendar days of disability, including Sundays and holidays; that is, all days are counted except day of accident and day of employee's ability to return to duty. Hernia is classed as a temporary disability to be charged with the actual number of calendar days during which the employee was unable to work.

FREQUENCY RATE means the number of all accidents (fatal, permanent, and temporary lost-time accidents) per million man-hours of exposure.

SEVERITY RATE means the number of days of disability resulting from all accidents (fatal, permanent, and temporary lost-time accidents) per thousand man-hours of exposure.

Type of Mine	Type of injury	Frequency Rate					Severity Rate				
		1925	1926	1927	1928	1929	1925	1926	1927	1928	1929
Anthracite	Fatal	1.022	.837	1.253	1.401	1.350	6.134	5.025	7.516	8.404	8.103
	P. T	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
	P P	.205	.963	.861	1.138	.675	.123	.938	.781	.742	.661
	Temp.	93.450	96.146	97.438	85.577	99.330	1.387	1.501	1.530	1.772	1.801
	Total	94.677	97.946	99.552	88.116	101.355	7.644	7.464	9.927	10.918	10.565
Bituminous	Fatal	1.156	1.286	1.913	1.399	1.247	6.935	7.717	11.488	8.393	7.485
	P T	.041	.038	.097	.034	.119	.248	.227	.547	.205	.713
	P P	1.114	.832	2.091	2.184	1.812	1.300	1.163	1.748	1.742	1.566
	Temp.	126.015	65.478	93.225	81.342	65.759	2.003	1.600	1.956	2.131	1.807
	Total	128.326	67.634	97.326	84.959	68.937	10.486	10.707	15.739	12.471	11.571
Metal	Fatal	1.027	.843	.891	1.271	.497	5.159	5.061	5.346	7.628	2.981
	P T	.000	.000	.000	.000	.055	.000	.000	.000	.000	.331
	P P	.616	.649	1.337	.969	1.711	.616	.689	1.717	.999	1.635
	Temp.	133.446	113.944	61.673	49.883	49.899	1.887	1.759	1.331	.884	1.043
	Total	135.089	115.436	63.901	52.123	52.162	8.662	7.519	8.394	9.511	5.990
Nonmetal	Fatal	.881	.772	.371	1.026	1.026	5.283	4.629	2.225	6.159	6.158
	P T	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
	P P	1.174	.772	1.112	1.369	1.283	.925	.308	1.335	.985	1.014
	Temp.	78.660	77.400	31.896	50.294	28.740	1.442	1.466	.853	.791	.622
	Total	80.715	78.944	33.379	52.689	31.049	7.650	6.403	4.413	7.935	7.794
Quarry and Open-cut	Fatal	.799	.904	.576	.645	.861	4.793	5.425	3.458	3.871	5.164
	P T	.000	.117	.000	.000	.000	.000	.707	.000	.000	.000
	P P	.940	.668	.615	.546	.709	.669	.914	.726	.774	.925
	Temp.	46.520	41.550	32.346	28.136	25.212	.668	.714	.557	.563	.458
	Total	48.259	43.241	33.537	29.327	26.782	6.430	7.760	4.741	5.208	6.547
Grand Total	Fatal	.994	.978	1.131	1.199	1.070	5.963	5.870	6.788	7.194	6.420
	P T	.015	.042	.022	.011	.047	.088	.253	.131	.065	.282
	P P	.891	.789	1.175	1.319	1.239	.948	.828	1.172	1.123	1.174
	Temp.	98.190	75.124	69.963	64.056	63.990	1.491	1.360	1.330	1.430	1.382
	Total	100.090	76.934	72.291	66.585	66.346	8.490	8.411	9.421	9.812	9.258

1/ Accident-frequency rates indicate number of injuries and deaths per million man-hours of exposure;
accident-severity rates indicate number of days of disability per thousand man-hours of exposure.

Code No.	Hours worked	Number of accidents					Number of days lost					Frequency 2/ rate	Severity 2/ rate	
		Fatal	P.T.	P.P.	Temp.	Total	Fatal	P.T.	P.P.	Temp.	Total			
103	1	142,128	0	0	0	8	8	0	0	0	64	64	56.287	.450
156	2	441,232	0	0	0	25	25	0	0	0	553	553	56.660	1.253
165	3	860,354	0	0	0	96	96	0	0	0	1208	1208	111.582	1.404
167	4	773,312	0	0	0	115	115	0	0	0	1143	1143	148.711	1.478
177	5	1,122,336	0	0	0	82	82	0	0	0	1948	1948	73.062	1.736
181	6	912,272	0	0	0	99	99	0	0	0	1684	1684	108.520	1.846
189	7	353,112	0	0	1	26	27	0	0	300	470	770	76.463	2.181
193	8	66,456	0	0	0	8	8	0	0	0	153	153	120.380	2.302
199	9	763,520	0	0	0	99	99	0	0	0	1895	1895	129.663	2.482
207	10	373,648	0	0	0	48	48	0	0	0	1070	1070	128.463	2.864
211	11	470,208	0	0	1	57	58	0	0	300	1175	1475	123.350	3.137
223	12	1,811,664	1	0	0	176	177	6000	0	0	2800	8800	97.700	4.857
226	13	1,688,458	1	0	0	207	208	6000	0	0	2808	8808	123.189	5.217
229	14	2,787,260	2	0	0	211	213	12000	0	0	3238	15238	76.419	5.467
235	15	1,269,795	1	0	1	119	121	6000	0	600	1996	8596	95.291	6.770
237	16	998,896	1	0	0	62	63	6000	0	0	1107	7107	63.070	7.115
238	17	1,041,544	1	0	0	100	101	6000	0	0	1518	7518	96.971	7.218
240	18	1,121,239	1	0	2	68	71	6000	0	600	2430	9030	63.323	8.054
249	19	791,120	1	0	1	96	98	6000	0	300	1405	7705	123.875	9.739
263	20	1,432,340	3	0	0	137	140	18000	0	0	1908	19908	97.742	13.899
264	21	1,470,923	2	0	5	206	213	12000	0	3300	5322	20622	144.807	14.020
265	22	1,680,848	3	0	4	107	114	18000	0	5400	2089	25489	67.823	15.164
269	23	1,788,912	4	0	1	170	175	24000	0	600	5482	30082	97.825	16.816
271	24	2,612,328	6	0	2	244	252	36000	0	4800	3800	44600	96.466	17.073
275	25	1,065,999	3	0	0	73	76	18000	0	0	1504	19504	71.295	18.296
280	26	305,856	1	0	0	12	13	6000	0	0	268	6268	42.504	20.493
281	27	587,160	2	0	0	56	58	12000	0	0	858	12358	98.781	21.899
290	28	475,856	2	0	0	55	57	12000	0	0	889	12889	119.784	27.086
291	29	1,889,717	7	0	3	327	337	42000	0	4350	5206	51556	178.334	27.282
TOTALS AND AVERAGES 1929		31,098,493	42	0	21	3,089	3,152	252,000	0	20,550	55,991	328,541	101.355	10.565
1928 TOTALS and AVERAGES		22,844,885	32	-	26	1,955	2,013	192,000	-	16,950	40,471	249,421	88.116	10.918

1/ As the accident reports from mining companies are considered confidential by the Bureau of Mines, the identities of the mines to which this table relates are not revealed.

2/ Frequency rate indicates the number of fatal, permanent, and other lost-time accidents per million man hours of exposure; severity rate indicates number of days lost from accidents per thousand man hours.

Note: - P.T. means permanent total disability; P.P. means permanent partial disability; Temp. means temporary disability.

Code No.	No	Hours worked	Number of accidents					Number of days lost					Frequency 2/ rate	Severity 2/ rate	
			Fatal	P.T.	P.P.	Temp.	Total	Fatal	P.T.	P.P.	Temp.	Total			
33	1	77,680	0	0	0	0	0	0	0	0	0	0	0	.000	3/.000
55	2	35,744	0	0	0	0	0	0	0	0	0	0	0	.000	4/.000
68	3	264,656	0	0	0	3	3	0	0	0	21	21	21	11.336	.079
87	4	378,478	0	0	0	5	5	0	0	0	108	108	108	13.211	.285
89	5	190,465	0	0	0	3	3	0	0	0	58	58	58	15.751	.305
94	6	169,740	0	0	0	2	2	0	0	0	67	67	67	11.783	.395
107	7	429,903	0	0	0	5	5	0	0	0	207	207	207	11.631	.482
109	8	59,994	0	0	0	1	1	0	0	0	30	30	30	16.668	.500
112	9	553,572	0	0	0	4	4	0	0	0	296	296	296	7.226	.535
124	10	370,472	0	0	0	6	6	0	0	0	239	239	239	16.196	.645
135	11	496,035	0	0	0	11	11	0	0	0	418	418	418	22.176	.843
137	12	760,088	0	0	0	38	38	0	0	0	662	662	662	49.994	.871
140	13	252,203	0	0	0	37	37	0	0	0	238	238	238	146.707	.944
143	14	621,117	0	0	0	6	6	0	0	0	614	614	614	9.660	.989
144	15	497,144	0	0	0	54	54	0	0	0	493	493	493	108.620	.992
150	16	633,957	0	0	0	38	38	0	0	0	722	722	722	59.941	1.139
152	17	225,299	0	0	0	9	9	0	0	0	263	263	263	39.947	1.167
157	18	115,640	0	0	0	10	10	0	0	0	151	151	151	86.475	1.306
159	19	762,999	0	0	2	22	24	0	0	600	417	1017	31.455	1.333	
169	20	169,064	0	0	0	6	6	0	0	0	265	265	265	35.490	1.567
174	21	39,246	0	0	0	2	2	0	0	0	66	66	66	50.961	1.682
175	22	190,457	0	0	0	11	11	0	0	0	323	323	323	57.756	1.696
180	23	425,008	0	0	0	19	19	0	0	0	766	766	766	44.705	1.802
185	24	280,948	0	0	0	15	15	0	0	0	551	551	551	53.391	1.961
186	25	871,470	0	0	1	5	6	0	0	1500	317	1817	6.885	2.085	
191	26	47,624	0	0	0	4	4	0	0	0	107	107	107	83.991	2.247
192	27	58,264	0	0	0	3	3	0	0	0	131	131	131	51.490	2.248
195	28	601,800	0	0	0	57	57	0	0	0	1407	1407	1407	94.716	2.338
196	29	673,740	0	0	0	60	60	0	0	0	1581	1581	1581	89.055	2.346
198	30	876,000	0	0	1	137	138	0	0	180	1990	2170	157.534	2.476	

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Code No.	No.	Hours worked	Number of accidents					Number of days lost					Frequency <u>2/</u> rate	Severity <u>2/</u> rate
			Fatal	P.T.	P.P.	Temp.	Total	Fatal	P.T.	P.P.	Temp.	Total		
205	31	399,272	0	0	1	31	32	0	0	300	755	1055	80.146	2.642
208	32	232,763	0	0	1	13	14	0	0	300	373	673	60.147	2.891
212	33	804,492	0	0	0	134	134	0	0	C	2543	2543	166.565	3.161
215	34	313,320	0	0	1	24	25	0	0	300	886	1186	79.791	3.785
218	35	173,804	0	0	1	36	37	0	0	300	431	731	212.883	4.206
222	36	433,428	0	0	0	50	50	0	0	0	2020	2020	115.359	4.661
225	37	392,150	0	0	1	14	15	0	0	1800	218	2018	38.251	5.146
227	38	256,112	0	0	1	14	15	0	0	750	619	1369	58.568	5.345
228	39	459,227	0	0	2	25	27	0	0	1500	977	2477	58.794	5.394
230	40	315,404	0	0	1	19	20	0	0	1200	534	1734	63.399	5.497
239	41	979,800	1	0	0	86	87	6000	0	0	1495	7495	88.794	7.650
240	42	300,560	0	0	1	6	7	0	0	1800	593	2393	23.290	7.962
244	43	1,253,734	1	0	2	86	89	6000	0	2400	2511	10911	70.988	8.703
245	44	301,047	0	0	2	10	12	0	0	2100	611	2711	39.861	9.005
246	45	127,760	0	0	1	5	6	0	0	300	855	1155	46.963	9.040
251	46	670,276	1	0	0	31	32	6000	0	0	889	6889	47.742	10.278
252	47	125,440	0	0	2	12	14	0	0	1050	256	1306	111.607	10.411
253	48	745,889	1	0	0	88	89	6000	0	0	1973	7973	119.321	10.689
254	49	837,459	1	0	3	4	8	6000	0	3000	271	9271	9.553	11.070
259	50	610,064	0	1	0	59	60	0	6000	0	2079	8079	98.350	13.243
260	51	474,395	1	0	0	17	18	6000	0	0	318	6318	37.903	13.304
266	52	708,833	1	0	3	13	17	6000	0	5100	421	11521	23.983	16.253
267	53	625,815	1	0	1	101	103	6000	0	300	3915	10215	164.585	16.323
268	54	391,644	1	0	0	27	28	6000	0	0	558	6558	71.493	16.745
273	55	2,665,924	5	1	9	190	205	30000	6000	4500	5745	46245	76.896	17.347
274	56	877,743	2	0	2	2	6	12000	0	3300	153	15453	6.836	17.605
277	57	307,719	1	0	0	4	5	6000	0	0	199	6199	16.249	20.145
278	58	479,320	1	0	1	22	24	6000	0	3000	658	9658	50.071	20.149
283	59	560,240	2	0	0	54	56	12000	0	0	1284	13284	99.957	23.711
284	60	2,087,204	6	0	10	151	167	36000	0	8700	5274	49974	80.011	23.943

Code No.	No.	Hours worked	Number of accidents					Number of days lost					Frequency <u>2/</u> rate	Severity <u>2/</u> rate
			Fatal	P.T.	P.P.	Temp.	Total	Fatal	P.T.	P.P.	Temp.	Total		
285	61	589,736	2	0	2	64	68	12000	0	600	1566	14166	115.306	24.021
287	62	943,975	2	1	2	83	88	12000	6000	2300	3288	23588	93.223	24.988
289	63	732,589	2	1	2	14	19	12000	6000	500	810	19410	25.821	26.378
292	64	180,360	1	0	0	2	3	6000	0	0	147	6147	16.633	34.082
293	65	181,144	1	0	0	5	6	6000	0	0	175	6175	33.123	34.089
295	66	447,864	2	0	4	52	58	12000	0	4650	1207	17857	129.504	39.871
305	67	475,720	5	0	0	73	78	30000	0	0	1344	31344	163.962	65.887
308	68	76,880	1	0	1	20	22	6000	0	300	377	6677	286.160	86.850
TOTALS AND AVERAGES, 1929		33,668,473	42	4	61	2,214	2,321	252,000	24,000	52,730	60,836	389,566	68.937	11.571
1928 TOTALS AND AVERAGES		29,308,391	41	1	64	2,384	2,490	246,000	6,000	51,060	62,453	365,513	84.959	12.471

1/ As the accident reports from mining companies are considered confidential by the Bureau of Mines, the identities of the mines to which this table relates are not revealed.

2/ Frequency rate indicates number of fatal, permanent, and other lost-time accidents per million man hours of exposure; severity rate indicates number of days lost from accidents per thousand man hours of exposure.

3/ Mine not eligible for trophy because active less than 150 days.

4/ Mine not eligible for trophy because less than 50 men employed underground.

Note: P.T. means permanent total disability; P.P. means permanent partial disability; Temp. means temporary disability.

GROUP 3. - ACCIDENT DATA FOR CERTAIN METAL MINES IN 1929 1/

Code No.	No.	Hours worked	Number of accidents					Number of days lost					Frequency rate	Severity rate	
			Fatal	P.T.	P.P.	Temp.	Total	Fatal	P.T.	P.P.	Temp.	Total			
4	1	345,695	0	0	0	0	0	0	0	0	0	0	0	.000	.000
6	2	234,415	0	0	0	0	0	0	0	0	0	0	0	.000	.000
12	3	183,864	0	0	0	0	0	0	0	0	0	0	0	.000	.000
25	4	108,668	0	0	0	0	0	0	0	0	0	0	0	.000	.000
31	5	97,804	0	0	0	0	0	0	0	0	0	0	0	.000	3/.000
61	6	127,188	0	0	0	1	1	0	0	0	0	3	3	7.862	.024
64	7	128,944	0	0	0	1	1	0	0	0	0	6	6	7.755	.047
65	8	145,835	0	0	0	1	1	0	0	0	0	8	8	6.857	.055
78	9	169,008	0	0	0	3	3	0	0	0	0	34	34	17.751	.201
95	10	51,360	0	0	0	1	1	0	0	0	0	21	21	19.470	.409
110	11	332,046	0	0	0	13	13	0	0	0	0	171	171	39.151	.515
119	12	207,329	0	0	0	8	8	0	0	0	0	118	118	38.586	.569
121	13	174,888	0	0	0	6	6	0	0	0	0	102	102	34.308	.583
125	14	162,663	0	0	0	3	3	0	0	0	0	107	107	18.443	.658
129	15	526,743	0	0	0	10	10	0	0	0	0	367	367	18.985	.697
132	16	1,694,628	0	0	3	1	4	0	0	0	1350	17	1367	2.360	.807
133	17	125,156	0	0	1	0	1	0	0	0	102	0	102	7.990	.815
141	18	162,536	0	0	0	12	12	0	0	0	0	155	155	73.830	.954
151	19	135,680	0	0	0	13	13	0	0	0	0	156	156	95.814	1.150
153	20	52,624	0	0	0	2	2	0	0	0	0	62	62	38.005	1.178
160	21	128,336	0	0	0	10	10	0	0	0	0	173	173	77.920	1.348
170	22	115,368	0	0	0	8	8	0	0	0	0	186	186	69.343	1.612
172	23	150,784	0	0	0	18	18	0	0	0	0	250	250	119.376	1.658
178	24	20,505	0	0	0	2	2	0	0	0	0	36	36	97.537	1.756
183	25	408,648	0	0	0	35	35	0	0	0	0	777	777	85.648	1.901
184	26	106,797	0	0	0	11	11	0	0	0	0	209	209	102.999	1.957
187	27	109,664	0	0	0	5	5	0	0	0	0	234	234	45.594	2.134
188	28	40,920	0	0	0	2	2	0	0	0	0	89	89	48.876	2.175
190	29	143,688	0	0	0	11	11	0	0	0	0	320	320	76.555	2.227
197	30	333,626	0	0	0	36	36	0	0	0	0	788	788	107.905	2.362
200	31	197,568	0	0	0	16	16	0	0	0	0	499	499	80.985	2.526
206	32	438,976	0	0	1	32	33	0	0	0	800	426	1226	75.175	2.793
	33	68,232	0	0	0	3	3	0	0	0	0	201	201	43.968	2.946

Code No.	No.	Hours worked	Number of accidents					Number of days lost					Frequency 2/ rate	Severity 2/ rate
			Fatal	P.T.	P.P.	Temp.	Total	Fatal	P.T.	P.P.	Temp.	Total		
214	34	33,275	0	0	1	3	4	0	0	1200	105	1305	10.436	3.405
216	35	117,072	0	0	0	16	16	0	0	0	448	448	136.668	3.827
217	36	2,226,836	1	0	2	15	18	6000	0	2040	1032	9072	8.083	4.074
219	37	399,192	0	0	1	62	63	0	0	800	892	1692	157.819	4.239
220	38	64,872	0	0	0	8	8	0	0	0	275	275	123.320	4.239
221	39	140,579	0	0	2	2	4	0	0	600	35	635	28.434	4.514
224	40	86,496	0	0	0	16	16	0	0	0	440	440	184.980	5.087
232	41	1,603,912	1	0	3	6	10	6000	0	2765	395	9160	6.235	5.711
233	42	152,112	0	0	1	27	28	0	0	300	608	908	184.075	5.969
236	43	126,624	0	0	0	17	17	0	0	0	879	879	134.256	6.942
242	44	31,156	0	0	0	2	2	0	0	0	257	257	64.172	8.246
243	45	908,559	1	0	2	14	17	6000	0	1600	240	7840	18.711	8.629
247	46	353,988	0	0	1	23	24	0	0	3000	352	3352	67.799	9.470
248	47	751,488	1	0	2	16	19	6000	0	570	671	7241	25.283	9.636
250	48	1,388,672	1	0	3	311	315	6000	0	2400	5194	13594	226.834	9.789
256	49	165,398	0	0	1	5	6	0	0	1800	234	2034	36.276	12.298
262	50	569,856	1	0	1	0	2	6000	0	1800	0	7800	3.510	13.688
272	51	101,320	0	0	2	9	11	0	0	1600	132	1732	108.567	17.094
282	52	525,652	2	0	0	13	15	12000	0	0	233	12233	28.535	23.272
286	53	269,788	1	0	1	29	31	6000	0	300	333	6633	114.905	24.586
296	54	319,475	0	1	3	46	50	0	6000	6800	615	13215	156.507	41.365
TOTALS AND AVERAGES, 1929		18,116,618	9	1	31	904	945	54,000	6,000	29,627	18,885	108,512	52.162	5.990
1928 TOTALS AND AVERAGES		16,518,598	21	-	16	824	861	126,000	-	16,500	14,603	157,103	52.123	9.511

1/ As the accident reports from mining companies are considered confidential by the Bureau of Mines, the identities of the mines to which this table relates are not revealed.

2/ Frequency rate indicates number of fatal, permanent, and other lost-time accidents per million man hours of exposure; severity rate indicates number of days lost from accidents per thousand man hours.

3/ Mine not eligible for trophy because less than 50 men employed underground.

Note: P.T. means permanent total; P.P. means permanent partial disability; Temp. means temporary disability.

GROUP 4. - ACCIDENT DATA FOR CERTAIN NONMETALLIC MINERAL MINES in 1929. 1/

Code No.	No.	Hours worked	Number of accidents					Number of days lost					Frequency 2/ rate	Severity 2/ rate
			Fatal	P. T.	P. P.	Temp.	Total	Fatal	P. T.	P. P.	Temp.	Total		
5	1	257,927	0	0	0	0	0	0	0	0	0	0	.000	.000
20	2	120,074	0	0	0	0	0	0	0	0	0	0	.000	.000
24	3	109,042	0	0	0	0	0	0	0	0	0	0	.000	3/.000
38	4	72,300	0	0	0	0	0	0	0	0	0	0	.000	3/.000
73	5	236,600	0	0	0	3	3	0	0	0	35	35	12.680	3/.148
102	6	131,866	0	0	0	3	3	0	0	0	57	57	22.750	.432
113	7	162,604	0	0	0	1	1	0	0	0	87	87	6.150	.535
130	8	193,561	0	0	0	11	11	0	0	0	138	138	56.830	.713
147	9	164,972	0	0	0	12	12	0	0	0	173	173	72.740	1.049
149	10	121,838	0	0	0	19	19	0	0	0	171	171	155.945	1.075
171	11	262,030	0	0	0	8	8	0	0	0	432	432	30.525	1.648
179	12	195,904	0	0	0	6	6	0	0	0	349	349	30.627	1.781
210	13	102,883	0	0	0	4	4	0	0	0	304	304	38.877	2.955
234	14	45,686	0	0	1	2	3	0	0	300	7	307	65.666	6.720
255	15	616,527	1	0	1	9	11	6,000	0	800	158	6,958	17.842	11.286
258	16	495,076	1	0	1	14	16	6,000	0	300	204	6,504	32.318	13.137
261	17	192,143	0	0	2	7	9	0	0	2,550	67	2,617	46.840	13.620
283	18	235,916	1	0	0	1	2	6,000	0	0	47	6,047	8.478	25.632
294	19	180,000	1	0	0	12	13	6,000	0	0	235	6,235	72.222	34.639
TOTALS AND AVERAGES, 1929		3,897,004	4	0	5	112	121	24,000	0	3,950	2,424	30,374	31.049	7.794
1928 TOTALS AND AVERAGES		2,922,799	3	-	4	147	154	18,000	-	2,880	2,313	23,193	52.689	7.935

1/ As the accident reports from mining companies are considered confidential by the Bureau of Mines, the identities of the mines to which this table relates are not revealed.

2/ Frequency rate indicates number of fatal, permanent, and other lost-time accidents per million man hours of exposure; severity rate indicates number of days lost from accidents per thousand man hours.

3/ Mine not eligible for trophy because less than 50 men employed underground.

Note: P. T. means permanent total disability; P. P. means permanent partial disability; and Temp. means temporary disability.

GROUP 5. - ACCIDENT DATA FOR CERTAIN QUARRIES AND OPEN PIT MINES IN 1929. 1/

Code No.	No.	Hours worked	Number of accidents					Number of days lost					Frequency 2/ rate	Severity 2/ rate
			Fatal	P.T.	P.P.	Temp.	Total	Fatal	P.T.	P.P.	Temp.	Total		
1	1	753,156	0	0	0	0	0	0	0	0	0	0	.000	.000
2	2	361,979	0	0	0	0	0	0	0	0	0	0	.000	.000
3	3	361,241	0	0	0	0	0	0	0	0	0	0	.000	.000
7	4	200,517	0	0	0	0	0	0	0	0	0	0	.000	.000
8	5	197,327	0	0	0	0	0	0	0	0	0	0	.000	.000
9	6	194,233	0	0	0	0	0	0	0	0	0	0	.000	.000
10	7	192,772	0	0	0	0	0	0	0	0	0	0	.000	.000
11	8	189,678	0	0	0	0	0	0	0	0	0	0	.000	.000
13	9	166,876	0	0	0	0	0	0	0	0	0	0	.000	.000
14	10	156,770	0	0	0	0	0	0	0	0	0	0	.000	.000
15	11	145,280	0	0	0	0	0	0	0	0	0	0	.000	.000
16	12	128,368	0	0	0	0	0	0	0	0	0	0	.000	.000
17	13	125,417	0	0	0	0	0	0	0	0	0	0	.000	.000
18	14	124,423	0	0	0	0	0	0	0	0	0	0	.000	.000
19	15	123,928	0	0	0	0	0	0	0	0	0	0	.000	.000
21	16	115,918	0	0	0	0	0	0	0	0	0	0	.000	.000
22	17	111,889	0	0	0	0	0	0	0	0	0	0	.000	.000
23	18	111,443	0	0	0	0	0	0	0	0	0	0	.000	.000
26	19	105,692	0	0	0	0	0	0	0	0	0	0	.000	.000
27	20	104,562	0	0	0	0	0	0	0	0	0	0	.000	.000
28	21	102,032	0	0	0	0	0	0	0	0	0	0	.000	.000
29	22	100,158	0	0	0	0	0	0	0	0	0	0	.000	.000
30	23	98,260	0	0	0	0	0	0	0	0	0	0	.000	.000
32	24	78,653	0	0	0	0	0	0	0	0	0	0	.000	.000
34	25	76,200	0	0	0	0	0	0	0	0	0	0	.000	.000
35	26	75,336	0	0	0	0	0	0	0	0	0	0	.000	.000
36	27	73,018	0	0	0	0	0	0	0	0	0	0	.000	.000
37	28	72,520	0	0	0	0	0	0	0	0	0	0	.000	.000
39	29	71,408	0	0	0	0	0	0	0	0	0	0	.000	.000
40	30	70,515	0	0	0	0	0	0	0	0	0	0	.000	.000
41	31	70,505	0	0	0	0	0	0	0	0	0	0	.000	.000
42	32	69,535	0	0	0	0	0	0	0	0	0	0	.000	.000
43	33	69,170	0	0	0	0	0	0	0	0	0	0	.000	.000
44	34	67,939	0	0	0	0	0	0	0	0	0	0	.000	.000

Code No.	No.	Hours worked	Number of accidents					Number of days lost					Frequency 2/ rate	Severity 2/ rate	
			Fatal	P.T.	P.P.	Temp.	Total	Fatal	P.T.	P.P.	Temp.	Total			
45	35	64,668	0	0	0	0	0	0	0	0	0	0	0	.000	.000
46	36	63,000	0	0	0	0	0	0	0	0	0	0	0	.000	.000
47	37	60,344	0	0	0	0	0	0	0	0	0	0	0	.000	.000
48	38	58,895	0	0	0	0	0	0	0	0	0	0	0	.000	.000
49	39	56,613	0	0	0	0	0	0	0	0	0	0	0	.000	.000
50	40	56,313	0	0	0	0	0	0	0	0	0	0	0	.000	.000
51	41	56,102	0	0	0	0	0	0	0	0	0	0	0	.000	.000
52	42	53,980	0	0	0	0	0	0	0	0	0	0	0	.000	.000
53	43	53,820	0	0	0	0	0	0	0	0	0	0	0	.000	.000
54	44	45,454	0	0	0	0	0	0	0	0	0	0	0	.000	.000
56	45	33,699	0	0	0	0	0	0	0	0	0	0	0	.000	.000
57	46	30,400	0	0	0	0	0	0	0	0	0	0	0	.000	.000
58	47	165,818	0	0	0	1	1	0	0	0	0	2	2	6.031	.012
59	48	106,680	0	0	0	1	1	0	0	0	0	2	2	9.374	.019
60	49	46,673	0	0	0	1	1	0	0	0	0	1	1	21.426	.021
62	50	205,943	0	0	0	2	2	0	0	0	0	6	6	9.711	.029
63	51	53,322	0	0	0	1	1	0	0	0	0	2	2	13.754	.038
66	52	102,980	0	0	0	2	2	0	0	0	0	11	11	12.271	.067
67	53	189,494	0	0	0	4	4	0	0	0	0	13	13	21,109	.069
69	54	45,963	0	0	0	1	1	0	0	0	0	4	4	21.757	.087
70	55	118,336	0	0	0	1	1	0	0	0	0	12	12	8.451	.101
71	56	79,652	0	0	0	1	1	0	0	0	0	10	10	12.555	.126
72	57	132,122	0	0	0	1	1	0	0	0	0	19	19	7.569	.144
74	58	84,856	0	0	0	2	2	0	0	0	0	13	13	23.569	.153
75	59	61,227	0	0	0	2	2	0	0	0	0	11	11	32.665	.180
76	60	267,079	0	0	0	3	3	0	0	0	0	49	49	11.233	.183
77	61	10,465	0	0	0	1	1	0	0	0	0	2	2	95.557	.191
80	62	141,059	0	0	0	1	1	0	0	0	0	33	33	7.089	.234
79	63	119,872	0	0	0	4	4	0	0	0	0	26	26	33.369	.217
81	64	101,288	0	0	0	1	1	0	0	0	0	24	24	9.873	.237
82	65	87,193	0	0	0	2	2	0	0	0	0	21	21	22.938	.241
83	66	113,273	0	0	0	2	2	0	0	0	0	28	28	17.656	.247
84	67	139,105	0	0	0	1	1	0	0	0	0	37	37	7.189	.266
85	68	37,372	0	0	0	1	1	0	0	0	0	10	10	26.758	.268
86	69	197,991	0	0	0	6	6	0	0	0	0	54	54	20.304	.273

Code No.	No.	Hours worked	Number of accidents					Number of days lost					Frequency <u>2/</u> rate	Severity <u>2/</u> rate
			Fatal	P.T.	P.P.	Temp.	Total	Fatal	P.T.	P.P.	Temp.	Total		
88	70	148,719	0	0	0	2	2	0	0	0	45	45	13.448	.303
90	71	223,240	0	0	0	8	8	0	0	0	69	69	35.836	.309
91	72	86,074	0	0	0	1	1	0	0	0	30	30	11.618	.349
92	73	84,587	0	0	0	2	2	0	0	0	30	30	23.644	.355
93	74	231,066	0	0	0	5	5	0	0	0	89	89	21.639	.385
96	75	177,273	0	0	0	16	16	0	0	0	73	73	90.256	.412
97	76	74,314	0	0	0	2	2	0	0	0	31	31	26.913	.417
98	77	35,817	0	0	0	2	2	0	0	0	15	15	55.839	.419
99	78	90,527	0	0	0	1	1	0	0	0	38	38	11.046	.420
100	79	82,984	0	0	0	5	5	0	0	0	35	35	60.253	.422
101	80	116,440	0	0	0	4	4	0	0	0	50	50	34.352	.429
104	81	215,078	0	0	0	2	2	0	0	0	99	99	9.299	.460
105	82	67,232	0	0	0	2	2	0	0	0	31	31	29.748	.461
106	83	118,923	0	0	0	5	5	0	0	0	57	57	42.044	.479
108	84	207,985	0	0	0	6	6	0	0	0	103	103	28.848	.495
111	85	212,835	0	0	0	4	4	0	0	0	110	110	18.794	.517
114	86	320,788	0	0	0	8	8	0	0	0	177	177	24.939	.552
115	87	177,466	0	0	0	6	6	0	0	0	98	98	33.809	.552
116	88	123,296	0	0	0	2	2	0	0	0	68	68	16.221	.552
117	89	84,013	0	0	0	4	4	0	0	0	47	47	47.612	.559
118	90	175,978	0	0	0	2	2	0	0	0	99	99	11.365	.563
120	91	1,526,930	0	0	1	36	37	0	0	600	285	885	24.232	.580
122	92	327,724	0	0	0	7	7	0	0	0	196	196	21.359	.598
123	93	46,818	0	0	0	1	1	0	0	0	30	30	21.359	.641
126	94	95,769	0	0	0	6	6	0	0	0	63	63	62.651	.658
127	95	75,847	0	0	0	1	1	0	0	0	50	50	13.184	.659
128	96	68,229	0	0	0	7	7	0	0	0	45	45	102.596	.660
131	97	58,043	0	0	0	2	2	0	0	0	45	45	34.454	.775
134	98	64,961	0	0	0	4	4	0	0	0	53	53	61.575	.816
136	99	152,280	0	0	0	1	1	0	0	0	129	129	6.567	.847
133	100	138,604	0	0	0	6	6	0	0	0	127	127	43.289	.916
139	101	84,788	0	0	0	6	6	0	0	0	79	79	70.765	.932
142	102	123,384	0	0	0	7	7	0	0	0	120	120	56.733	.973
145	103	84,999	0	0	0	2	2	0	0	0	85	85	23.530	1.000
146	104	51,967	0	0	0	2	2	0	0	0	54	54	38.486	1.039

Code No.	No.	Hours worked	Number of accidents					Number of days lost					Frequency rate	Severity rate
			Fatal	P. T.	P.P.	Temp.	Total	Fatal	P.T.	P.P.	Temp.	Total		
148	105	112,375	0	0	0	1	1	0	0	0	120	120	8.899	1.068
154	106	877,266	0	0	1	69	70	0	0	360	678	1038	79.793	1.183
155	107	95,952	0	0	0	4	4	0	0	0	117	117	41.688	1.219
158	108	98,549	0	0	0	8	8	0	0	0	131	131	81.178	1.329
161	109	72,263	0	0	0	2	2	0	0	0	99	99	27.677	1.370
162	110	130,524	0	0	0	8	8	0	0	0	181	181	61.291	1.388
163	111	24,356	0	0	0	1	1	0	0	0	34	34	41.058	1.396
164	112	258,389	0	0	1	10	11	0	0	300	63	363	42.489	1.402
166	113	114,465	0	0	0	13	13	0	0	0	168	168	113.572	1.468
168	114	123,211	0	0	0	10	10	0	0	0	192	192	81.162	1.558
173	115	179,096	0	0	0	1	2	0	0	300	1	301	11.167	1.681
176	116	83,390	0	0	0	1	1	0	0	0	142	142	11.992	1.703
182	117	86,237	0	0	0	2	2	0	0	0	163	163	23.192	1.890
194	118	84,194	0	0	0	2	2	0	0	0	194	194	23.755	2.304
201	119	198,661	0	0	0	9	9	0	0	0	502	502	45.303	2.527
202	120	216,677	0	0	0	19	19	0	0	0	551	551	87.688	2.543
203	121	50,807	0	0	0	3	3	0	0	0	130	130	59.047	2.559
204	122	63,426	0	0	0	2	2	0	0	0	163	163	31.533	2.570
213	123	68,849	0	0	0	4	4	0	0	0	224	224	58.098	3.253
231	124	115,139	0	0	0	4	6	0	0	600	42	642	52.111	5.576
257	125	380,713	0	0	1	18	19	0	0	4500	396	4896	49.906	12.860
270	126	47,790	0	0	1	1	2	0	0	800	11	811	41.850	16.970
276	127	211,590	0	0	2	9	11	0	0	3900	225	4125	51.987	19.495
279	128	88,313	0	0	1	0	1	0	0	1800	0	1800	11.323	20.382
297	129	149,002	1	0	0	11	12	6000	0	0	217	6217	80.536	41.724
298	130	178,727	1	0	1	1	3	6000	0	2400	33	8433	16.785	47.184
299	131	124,968	1	0	0	3	4	6000	0	0	25	6025	32.008	48.212
300	132	124,261	1	0	0	4	5	6000	0	0	212	6212	40.238	49.992
301	133	116,017	1	0	0	6	7	6000	0	0	70	6070	60.336	52.320
302	134	105,447	1	0	0	1	2	6000	0	0	4	6004	18.967	56.939
303	135	314,586	3	0	1	44	48	18000	0	300	494	18794	152.581	59.742
304	136	94,841	1	0	0	0	1	6000	0	0	0	6000	10.544	63.264

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Code No.	No.	Hours worked	Number of accidents					Number of days lost					Frequency ^{2/} rate	Severity ^{2/} rate
			Fatal	P.T.	P.P.	Temp.	Total	Fatal	P.T.	P.P.	Temp.	Total		
306	137	90,555	1	0	0	1	2	6000	0	0	28	6028	22.086	66.567
307	138	89,857	1	0	0	2	3	6000	0	0	5	6005	33.386	66.828
309	139	152,900	2	0	1	0	3	12000	0	2400	0	14400	19.621	94.179
310	140	37,755	1	0	0	0	1	6000	0	0	0	6000	26.487	158.919
311	141	67,018	2	0	0	5	7	12000	0	0	293	12293	104.450	183.428
TOTALS AND AVERAGES, 1929		19,752,418	17	0	14	498	529	102,000	0	18,260	9,053	129,313	26.782	6.547
1928 TOTALS AND AVERAGES		20,152,034	13	0	11	567	591	78,000	0	15,600	11,352	104,952	29.327	5.208

1/ As the accident reports from mining companies are considered confidential by the Bureau of Mines, the identities of the mines to which this table relates are not revealed.

2/ Frequency rate indicates number of fatal, permanent, and other lost-time accidents per million man hours of exposure; severity rate indicates number of days lost from accidents per thousand man hours.

Note: P.T. means permanent total disability; P.P. means permanent partial disability; and Temp. means temporary disability.

