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EIGHTEENTH
ANNUAL REPORT

OF THE

STATE INSPECTOR

OF

COAL MINES

1930



THE BRADFORD-ROBINSON PRINTING CO
DENVER, COLORADO

1931

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PERSONNEL OF THE COAL MINE INSPECTION DEPARTMENT

JAMES DALRYMPLE, Chief Inspector.....Denver, Colo.
ADA R. TIBBITS, Chief Clerk.....Denver, Colo.
MAX M. GREENWALD, Assistant Clerk.....Denver, Colo.

FIELD FORCE AND DISTRICTS

W. M. LAURIE, 512 Ash St., Trinidad, Colo.....District No. 1

Includes the following mines in Las Animas County:
Anchor, Baldy, Bear Canon No. 6, Beshoar, Boncarbo,
Bowen, Cox, Dix, Engle, Fairview, Ferrill, Fishers Peak,
Flag, Frederick, Jeffries, La Belle, Lakeview, Martinez,
Morley, Pickford, Pritchard, Santa Fe, Sopris, Tobasco,
Thor, Toller and Vigil.

FINLAY MCCALLUM, Box 334, Aguilar, Colo.....District No. 2

Includes the following mines in Las Animas County:
Brodhead No. 9, Creston, Davich, Delagua, Empire, Ken-
neth, Ludlow, New Congo, Rapson and Royal, and the fol-
lowing mines in Huerfano County: Black Hawk, Bunker
Hill, Cameron, Mutual, Pryor, Ravenwood and Torrid
mines.

GEO. C. DALRYMPLE, Box 645, Walsenburg, Colo.....District No. 3

Includes the following mines in Huerfano County: Alamo
No. 1, Alamo No. 2, Calumet No. 1, Calumet No. 2,
Gordon, Kebler No. 2, Maitland, Oakdale, Ojo Canon, Pa-
cific, Toltec and Vesta, and all of the mines in Fremont
County.

JAMES W. GRAHAM, Lafayette, Colo.....District No. 4

Includes all mines in Boulder, Routt and Moffat Counties.

HUGO H. MACHIN, 1009 Lincoln Place, Boulder, Colo...District No. 5

Includes all mines in Weld, El Paso, Jefferson, Jackson
and Elbert Counties.

J. B. BURNS, 548 Grand Ave., Grand Junction, Colo...District No. 6

Includes all mines in Archuleta, Delta, Garfield, Gunni-
son, La Plata, Mesa, Montezuma, Montrose, Ouray, Pitkin,
Rio Blanco and San Miguel Counties.

BOARD OF EXAMINERS FOR COAL MINE OFFICIALS,
appointed for four years beginning January, 1930, and ending
December 31, 1933, consists of:

MR. FRED W. WHITESIDE, coal mining engineer, Denver, Colo.

MR. RALPH W. MOORE, coal mine official, Coalmont, Colo.

MR. HAROLD WILLIAMS, coal miner, Grand Junction, Colo.

MR. THOS. E. LLEWELLYN, coal miner, Silt, Colo.

LETTER OF TRANSMITTAL

Denver, Colorado, March 1, 1931.

To His Excellency,

WILLIAM H. ADAMS,
Governor of Colorado.

Sir: Herewith I have the honor to submit to you, in accordance with Section 27 of an Act entitled "Coal Mining Laws," the Eighteenth Annual Report of this Department.

The period covered began January 1 and ended December 31, 1930.

Respectfully,

JAMES DALRYMPLE,
State Inspector of Coal Mines.

STATEMENT SHOWING RECEIPTS AND DISBURSE-
MENTS FROM JANUARY 1ST TO
DECEMBER 31ST, 1930.

RECEIPTS

Tax collected on coal mined.....	\$34,888.32	
From sales of copies of the coal mining laws.....	195.80	
Refunds	16.07	
Balance brought forward from 1929.....	13,824.72	
Total		\$48,924.91

DISBURSEMENTS

Salaries of entire department.....	\$26,060.33	
Fatal accident investigators, per diem and expenses....	91.50	
Railroad transportation.....	620.68	
Automobile mileage.....	4,664.27	
Board of Examiners.....	1,484.15	
Printing	377.75	
Postage	636.72	
Stationery and office supplies.....	327.14	
Telephone service (toll calls entire department).....	168.76	
Telegraph service.....	13.34	
Instruments	66.01	
Express	8.93	
Hotel	896.08	
Meals	1,615.55	
Miscellaneous	652.27	
Total		\$37,683.48
Surplus, December 31, 1930.....		\$11,241.43

SUMMARY OF THE COAL PRODUCTION OF COLORADO FOR 1930

Number of mines operated.....	275
Number of new and old mines opened: New mines, 7; old mines reopened, 33; total.....	40
Number of mines closed, 12; abandoned, 2; total.....	14
Tons of sub-bituminous coal produced.....	2,803,164
Tons of semi-bituminous coal produced.....	404,086
Tons of bituminous coal produced.....	4,932,056
Tons of semi-anthracite coal produced.....	49,507
Tons of anthracite coal produced.....	49,281
Total number of tons of coal produced.....	8,238,094
Decrease, 1930.....	1,695,970
Tons of run of mine coal produced.....	1,923,495
Tons of lump coal produced.....	2,296,958
Tons of nut coal produced.....	869,110
Tons of pea coal produced.....	244,777
Tons of slack coal produced.....	2,903,754
Percentage of slack coal produced.....	46%
Tons of coal mined by hand.....	3,529,811
Tons of coal mined by machine.....	4,708,283
Number and kind of machines used; compressed air, 55; electric, 327; total.....	382
Tons of coal mined for shipment by railroad, 6,992,678; by trucks and wagons, 974,558; total.....	7,967,236
Tons of coal shipped out of the state.....	1,914,183
Tons of coal used at the mines for heat, power, waste, etc.....	270,858
Tons of coal made into coke.....	687,800
Tons of coke made.....	458,443
Number of days coke ovens were operated.....	309
Number of coke ovens used.....	295 1/2
Number of men employed at coke ovens.....	76
Number of miners employed—pick miners, 3,768; machine miners, 3,425; total.....	7,193
Number of men employed in and about mines (average).....	10,683
Average number of days worked (man days).....	164.6
Daily production per miner, tons.....	6.9
Annual production per miner, tons.....	1,145.3
Number and type of Safety Lamps used—flame, 516; electric, 9,996; total.....	10,512
Number of carbide lamps used.....	3,106
*Number of pounds of carbide used (approximate).....	83,381
Number of pounds of black powder used.....	1,158,422
Number of pounds of permissible powder used.....	536,990
Number of pounds of dynamite powder used.....	68,873
Number of men killed—underground, 33; surface, 3; total.....	36
Number of men injured.....	1,522
Number of men killed per thousand 300-day workers.....	6.15
Number of men killed per thousand employed.....	3.38
Number of men injured per thousand employed.....	142.47
Number of tons of coal produced for each life lost.....	228,836
Number of tons of coal produced for each non-fatal accident....	5,413
Number of men employed per fatal accident.....	296.75
Number of men employed per non-fatal accident.....	7.0
Number of men killed per million tons of coal produced.....	4.37
Number of men injured per million tons of coal produced.....	184.75
Number of widows left.....	24
Number of children left fatherless.....	60

*A number of the mines did not report the carbide used as same was furnished by the employes.

INTRODUCTION

The Eighteenth Annual Report of the State Inspector of Coal Mines is everything but encouraging for the Coal Mining Industry. However, it is reasonably satisfactory from the standpoint of this Department which was created for the purpose of safeguarding life and property, but there is still room for improvement and every effort possible should be made to reduce the number of accidents in our coal mines. The following tables will give you a short history of this Department since the present laws were enacted in 1913.

Year	STATE OF COLORADO					Total No. of Mines State
	Tons of Coal Produced	No. of Men Employed	No. of Fatal Accidents	Killed Per 1000 Employed	Tons Coal Produced Per Fatal Accident	
1913....	9,268,939	12,871	110	8.6	84,263	178
1914....	8,201,423	10,596	75	7.0	109,352	188
1915....	8,715,397	12,563	64	5.1	136,178	199
1916....	10,522,185	13,315	44	3.35	239,095	219
1917....	12,515,305	13,970	188	13.5	66,571	238
1918....	12,658,055	14,374	71	4.94	177,578	249
1919....	10,406,543	12,799	91	7.1	114,357	241
1920....	12,514,693	13,665	70	5.1	178,781	231
1921....	9,141,947	14,164	52	3.6	175,807	249
1922....	10,003,610	13,436	74	5.51	135,184	275
1923....	10,336,735	13,277	66	4.97	156,617	276
1924....	10,501,088	12,703	44	3.48	238,661	271
1925....	10,440,387	12,228	57	4.66	183,165	283
1926....	10,616,760	11,768	52	4.42	204,168	261
1927....	9,781,580	11,453	54	4.7	181,140	266
1928....	9,921,585	11,474	35	3.05	283,474	266
1929....	9,934,064	11,196	53	4.73	187,435	264
1930....	8,238,094	10,683	36	3.38	228,836	275
Average.	10,206,577	12,574	68.7	5.46	148,568	246

Year	MINES EMPLOYING 1 TO 5 MEN, INCLUSIVE					No. of Mines
	Tons of Coal Produced	No. of Men Employed	No. of Fatal Accidents	Killed Per 1000 Employed	Tons Coal Produced Per Fatal Accident	
1913....	42,399	82	2	24.4	21,199	23
1914....	50,001	129	3	23.26	16,667	41
1915....	50,304	144	1	6.94	50,304	49
1916....	70,815	144	2	13.89	35,407	65
1917....	71,969	129	0	....	....	52
1918....	77,058	177	0	....	....	63
1919....	87,065	194	0	....	....	72
1920....	94,586	188	2	10.64	47,293	71
1921....	94,422	218	1	4.59	94,422	83
1922....	98,923	249	3	12.05	32,974	95
1923....	112,484	253	2	7.91	56,242	106
1924....	120,344	256	0	....	....	111
1925....	137,780	325	5	15.38	27,556	132
1926....	105,506	230	5	21.7	21,101	105
1927....	113,674	263	0	....	....	110
1928....	131,914	252	1	3.97	131,914	116
1929....	115,833	261	0	....	....	117
1930....	135,853	342	3	8.77	45,284	147
Average.	95,052	213	1.67	7.84	56,917	86.5

You will note by the preceding tables that, although there was a decrease of 1,695,970 tons in the production over that of 1929, there was produced 228,836 tons of coal for each life lost in 1930 as compared with 187,435 tons of coal produced in 1929, and that the death rate per 1,000 employed in 1930 was 3.38 against 4.73 in 1929. The death rate per thousand 300-day workers in 1930 was 6.15 against 7.80 in 1929. You will also note by the above tables that there was an increase in the production, number of mines, number of men employed and number of men killed in the mines employing from one to five men inclusive over that of 1929, and also over an eighteen year average, which would indicate, if statistics are correct, that the supervision and laws governing the smaller mines should be more stringent.

The coal mine inspection department is maintained by a coal tax, based upon the coal production. In 1930 there was a decrease of 1,695,970 tons of coal over that of 1929. The tax collected from coal mined during 1930 would amount to \$32,952.38. The total expenditures from January 1st, 1930, to December 31st, 1930, were \$37,863.48, leaving a deficit of \$4,731.10 to which should be added \$769.00 for printing the 1929 Annual Report which was paid for from money derived from advertising in former annual reports, making a total deficit of \$5,500.10 for 1930.

From present indications, the outlook for the coal business in 1931 is worse than in 1930, and as our only means of income is from the coal tax, one deputy inspector will have to be laid off in the very near future and if there is no material increase in production in the next four or five months, another inspector will have to be laid off.

If the State Inspection of Coal Mines has to any material extent been responsible for the making of coal mines more safe to work in, then something must be done to take care of the finances of this department as the expenditures are greater than the income, or income necessary to adequately take care of proper inspection of the coal mines of this state. Furthermore, the requirements of the present mining laws require that all coal mines be inspected every ninety days and this cannot be done with our present income.

It is the general opinion that the tonnage produced should govern the amount of inspection, that is to say, that when the mines are working steady and producing normal production, more inspection is needed than when mines are working half time with half normal production. This opinion, in my judgment, is entirely wrong. When mines are working steady, the owners are making at least a fair return on their investment. To keep the production up the mines must be kept in repair. There is no trouble in getting the money to do this at such times. With steady work, the minds of the workers are on their work. They exercise more care in doing their work. When the mines are only working half time the owners are not making any money,

they refuse to spend any on repair work and the employes become indifferent and careless with the result that the death rate per 1,000—300-day workers increases. It has been my experience that the times when inspections are most needed is when the production is above normal, and when everybody is being pushed for more coal and also when the production is below normal, and the owners fail to allow funds to keep the mines in shape and the employes are dissatisfied and indifferent to their own safety.

There is a bill now before the legislature seeking to amend the Coal Mining Laws. Two of the principal amendments are in regard to the mines employing five or less men underground. One of them is to exempt the mines employing five men or less underground from the state inspection and the other is exempting them from paying a coal tax. Morally both of the amendments are wrong, but the Twenty-sixth and Twenty-seventh General Assemblies are responsible for their being, as they exempted the five-men mines from employing certified men and having to install ventilating fans, while the large mines were paying 95% of the cost of inspecting the five-men mines whose fatality record for a period of eighteen years was 40% higher than that of the state as a whole.

There were thirty-six lives lost in and around the mines of Colorado in 1930. A decrease of seventeen lives or nearly 32% compared with 1929. To somewhat offset this decrease we employed nine per cent less men, produced $17\frac{1}{2}\%$ less coal and worked 22% less time, but comparatively speaking there is some improvement as stated above. Thirty-three of the thirty-six deaths were underground. Eighteen, or 55.6% of them were from falls of rock and coal. Sixteen of the eighteen were at the face and of these sixteen, ten of them were at the roadheads. Compared with 1929, the deaths from falls of rock and coal were reduced 13% and the roadhead accidents were reduced 24.4%.

Thirteen fatal accidents or 38.24% of the total underground fatal accidents were from haulage against eight or 15% in 1929, an increase of 120%. Twelve of the thirteen were from mechanical and one from animal haulage, including one of which was on the surface.

Two, or 6%, were from electricity, compared with four, or 8%, in 1929, a decrease of 25%. One fatal accident is classed as miscellaneous and the remaining two on the surface.

In 1930 there were 147 mines where five men or less were employed. These mines employed 342 men and produced 135,853 tons of coal. Their fatality rate per 1,000 employed was 8.77. The number of tons of coal produced per life lost was 45,277. Comparing this with the state as a whole, the mines employing five men or less killed two and one-half times as many men per 1,000 employed as did the state, and produced only one-fifth as much coal per life lost as did the state as a whole.

It is proper to believe that a stricter enforcement of the

timbering agreements and setting of roadhead props by the mine foremen and their assistants is to a great extent responsible for the decrease in the number of accidents from falls and it is to be hoped that they will put forth the same effort to reduce the accidents from haulage. There are probably more ways that accidents can happen from haulage than there are from falls, consequently more effort will be required to get the results we got from falls, but the task is a worthy one and deserving of all the consideration that can be given it.

The fatal accident reports by the deputy inspectors stated that five of the haulage accidents were from runaway cars. Six from being crushed between cars and ribs or timbers, and two between cars and working faces. All of the above haulage accidents happened on mechanical haulageways, either through cars being bumped over safety blocks or becoming detached or derailed. Of the two remaining, one was kicked by a mule and one was caught between rope and sheave wheel on the surface.

The above information on haulage accidents is given so that the mine officials and state inspectors may know better the remedies and where to apply them and that the workers may know and be more careful in the handling of cars and getting on and off the cars while they are in motion and last, but not least, that the owners may know where, why and how such accidents happened and issue instructions to their mine officials that the conditions and practices responsible for them must be remedied and abolished as soon as possible and not fail to see that such instructions are carried out. The latter recommendation is the most important of all as without it very little, if any, improvement can be expected.

The following is a summary of the work done by the field force of this department during the year:

Total inspections made in 1930.....	1,358
Total number of mines inspected.....	314
Number of fatal accidents investigated by inspectors and special investigators.....	36
Number of inquests attended by inspectors and special investigators.....	35
Scale inspections.....	4
Complaints investigated and adjusted.....	39
Prosecutions	1
Miles traveled by auto.....	54,137
Railroad scrip used.....	\$620.68

In conclusion I wish to extend my thanks to the field staff for the loyal support rendered the department, also to the operators for their co-operation in carrying out the recommendations requested by the inspectors.

Respectfully submitted,

(Signed) JAMES DALRYMPLE,
State Inspector of Coal Mines.

NEW MINES

Seven new mines were opened up during the year, six are small wagon mines, but the Morrison mine, by the Clayton Coal Co., is laid out on a large scale. It is located near Erie, Weld county. Mr. George Morrison, owner and general manager of the property, has made every effort to put this mine on the most modern and efficient basis. The following detailed equipment will show that no improvement has been overlooked to make this property up to date in every way.

One shaft, 168 ft. deep, 8 ft. 4 in. x 16 ft.
 Two Robert E. Holmes self-dumping cages, 18,000 lbs. each.
 One tippie, 67 ft. high.
 Two sheave wheels, diameter, 6 ft.
 One main railroad screen, 72 ft. long, 7 ft. wide, covering four railroad tracks, making 5 kinds of coal; automatically controlled and run by G. E. motor, 30 h. p., 440 a. c.
 One Custom Screen, 30 ft. long, 6 ft. wide, making four kinds of coal and is driven by 25 h. p. A. C., automatically controlled. (G. E. motor.)
 Two Ottumwa Box Car Loaders; one for loading lump in box cars, run by 20 h. p. G. E. motor, 440 A. C.; one for loading nut in box cars, run by 10 h. p. 440 A. C. G. E. motor.
 One Jeffrey Coal Elevator, delivering slack from crusher and slack screen to main screen; capacity 200 tons per hour; 40 ft. high; run by 15 h. p. 440 A. C. automatically controlled G. E. motor.
 One 800 h. p. Vulcan steam hoist, 22x48 first motion, two cylinder, double cone drum, $6\frac{1}{2}$ x $8\frac{1}{2}$ diameter, steam controlled reverse, hand operated pinch type double post brake ($1\frac{1}{2}$ in. rope on drum), equipped with A. E. Johnson automatically controlled overwind and man hoisting control.
 One Shuse steam engine, 18 ft. x 18 ft., direct connected to a G. E. 150 k. w. 250 volt generator, 250 r. p. m.
 Three H. R. T. boilers, 150 h. p. each.
 One smokestack, 16 ft. diameter at base, 8 ft. diameter at top, 125 ft. high, and self-supporting; breaching leading from boilers to stack, 82 ft. long; 4 ft. x 10 ft. at big end, 4 ft. wide, 2 ft. high at boiler end.
 One boiler room, 44 ft. by 64 ft. by 18 ft. high.
 One engine room, 40 ft. by 44 ft. by 12 ft. high.
 One mine office, 18 ft. by 44 ft. by 8 ft. high, including one main office room 18x18; one hospital room 12x18; one private room 10x18; one hall 4x18 ft.
 One blacksmith shop, 18x18 ft.
 One Webster Coal Crusher, capacity 50 tons per hour.
 One Fairbanks mine hopper scale, capacity five tons.
 One storage water tank, 16x18 ft.
 One deep well 500 ft. deep, 3-inch working barrel.
 One Cameron steam boiler feed pump, 3-inch discharge.
 One 5x5 in. Denning Electric Piston Pump, delivering water to surface.
 One Sullivan Iron Clad undercutter mining machine.
 One small electric motor hoist, 5 h. p. G. E. 440 motor.

Fiddlin Bill, the next largest mine to open up is in Montrose county, near Naturita. It was financed by the Rare Metals Corporation, with Mr. Frederick F. Kett, as general manager and is equipped for a 40-ton daily capacity. A 50-ton bin and a blacksmith shop were built and a ropeway installed. The cost to date was about \$10,000.00 and the product is intended for the mill this company runs and local trade. The coal is classified by the company as bituminous and there is no railroad connection.

The Pluto Mine was opened up by the Domestic Coal Co. with Geo. C. Watson as owner and manager. It is located in Boulder county halfway between the Industrial and Crown mines and the postoffice address is Boulder. The cost of the development so far is \$8,736.60 and \$5,000.00 additional will be spent during the coming summer to erect a modern tippie. The

company plans to equip the mine for a 100-ton daily capacity. To date there is no railroad connection.

The New Pollard Mine, opened up by C. F. Pollard, is located in Meeker, Rio Blanco county, and is a very small property, costing about \$1,000.00 and is intended for local trade only.

The Jones Mine, opened up by R. C. Jones, close to Bear River, Routt county, at a small outlay and equipped for a 15-ton daily capacity and supplies a wagon trade.

The Superior Mine, opened up by H. J. Smith near Florence, Fremont county, is developing a small coal acreage to meet local trade.

The New Fremont Mine, opened up by the Giuliano Coal Co. near Coal Creek, Fremont county. No data was furnished this department, consequently we do not know what the extent of this property will be.

IMPROVEMENTS

There were a few major improvements made during the year, The Crested Butte Mine, operated by the Colorado Fuel & Iron Co., electrified the inside of this mine with seven mining machines, one locomotive, and five hoists. Installed 350 new pit cars, graded and retied all rope haulage. Installed two new boilers and three 150 KW generators. Electrified tippie and fan and increased side track capacity.

The Oliver Coal Co. completed a standard gauge railroad track, erected a new steel tippie, installed a new hoist and put in 32 new pit cars. A new office building was also built.

At the Morley mine operated by the Colorado Fuel & Iron Co. electric trolley locomotives were installed which had the approval of the State Inspection department. In connection with this installation the mine was thoroughly rock dusted.

Most of the mine equipment purchased and improvements made were at small mines. Eighteen tipples were erected, seven scales, 355 electric lamps, four fans, five shaker screens, fourteen steam and electric hoists and nine cutting machines installed. Three new boilers and 130 pit cars were purchased. Several pumps, nut coal washers, air compressors, motors, scales and box car loaders were installed.

The Temple Fuel Co. reported improvements costing \$17,639.00 and the Vickers Coal Co. spent \$10,673.00. The improvements made were not enumerated.

SOUTHWESTERN MINE EXPLOSION

On February 7, 1930, Deputy Inspector Finlay McCallum was advised that an explosion had occurred at the Southwestern mine on February 5th at 5:30 P. M. On February 8th, Inspector

McCallum went to the mine and found both portals partially closed, with explosive gas issuing from fan openings.

On February 12th and 13th, accompanied by Mr. Denny and Mr. Kintze, of the United States Bureau of Mines, Inspector McCallum and a few helmet men, the underground workings were explored for a distance of 1,000 feet in main opening and all workings off main opening. No bodies were found. However, upon coming out of the mine some of our party thought they detected offensive odor coming from under a fall of rock. A week later another investigation proved that there were no bodies under the fall.

The Southwestern mine had been abandoned for about two years and during that time had filled up with explosive gas until it was issuing from the mine in considerable quantity.

It is our opinion that the explosion was caused by someone on the outside of the mine igniting the gas with an open flame at a point where the gas was inflammable but below the explosive point.

Upon inquiry we failed to find any evidence of anyone missing or injured in the mining towns or coal camps within a radius of twenty miles from the mine.

Both openings have been closed by caving, properly fenced off and danger signals posted at proper points.

REPORT ON OPENING OF FIRE SEALS AT NEWCASTLE MINE

The Newcastle mine at Newcastle, Colo., was sealed in October on account of fire. On December 29th, 1930, accompanied by E. H. Denny, Geo. B. Parker, Thos. Templeman and J. B. Burns, we went to the mine to open the seal in the tunnel for the purpose of determining whether or not the fire was out. Eighteen hours after this seal was broken, the fire was burning briskly so the seal was again closed.

FIRST AID AND MINE RESCUE WORK IN 1930

The Training Stations here given trained the following number of men in First Aid and Mine Rescue work:

COLORADO FUEL & IRON CO.

Mine	First Aid	Mine Rescue
Morley	0	0
Frederick	63	0
Toller	6	0
Cameron	50	0
Robinson No. 1.....	250	0
Pictou	315	0
Kebler	75	0
Rockvale	6	0
Nonac	0	0
Crested Butte.....	15	10

VICTOR-AMERICAN FUEL CO.

	First Aid	Mine Rescue
Chandler Mine.....	50	15
Delagua Mine.....	250	20
Wadge Mine.....	66	5
Pinnacle Mine.....	170	10

McNEIL COAL CORP.

MacGregor Mine.....	23	0
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BEAR RIVER COAL CO.

Bear River Mine.....	52	5
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PINNACLE KEMMERER

P-K Mine.....	71	5
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COLORADO & UTAH FUEL CO.

Harris Mine.....	231	10
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MOFFAT COAL CO.

Perry Mine.....	124	10
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KEYSTONE COAL CO.

Keystone Mine.....	40	5
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HAYDEN COAL CO.

Hayden Mine.....	133	0
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ROUTT COUNTY COAL OPERATORS' ASSOCIATION "FIRST AID CONTEST"

The Second Annual First Aid Contest of the Routt County Coal Operators' Association was held at Oak Creek, Colorado, on September 4th, 1930. There were six teams entered, with the following results.

Team No. 1, Bear River mine, The Bear River Coal Co.....	96.85
Team No. 2, Pinnacle, The Victor-American Fuel Co.....	99.50
Team No. 3, Wadge mine, Victor-American Fuel Co.....	98.65
Team No. 4, Oak Hills mines, The Moffat Coal Co.....	98.85
Team No. 5, Harris mine, The Colo. & Utah Coal Co.....	97.95
Team No. 6, P. K. mine, Pinnacle Kemmerer Fuel Co.....	99.45

A Mine Rescue Team was selected from the Moffat and Pinnacle mines.

The team winning first prize received a Trophy Cup presented by the Routt County Coal Operators' Association, this cup to be held until the next Annual Contest at which time it will again be presented to the championship team. The team winning first prize will also represent Routt County in the State Meet. The winning team also received a basket of flowers presented by K. G. Yama, \$20.00 presented by Dr. Jefferson of Steamboat Springs, Colo., each team member received a \$5.00 gold piece given by the town of Oak Creek, an individual automobile "first aid" packet from the association and a pocket knife presented by the Lions Club.

Teams winning second and third place were each presented with Automobile First Aid packets, pocket knives, as did those members in the winning team, besides each member of the team

winning second place received three dollars each and those on the team winning third place received one dollar and fifty cents each.

Each of the other participants, not mentioned above, were given an Automobile First Aid packet, presented by the association, a pocket knife presented by the Lions Club and one dollar each presented by the Employers Mutual Insurance Co.

The following men put on a "Mine Rescue" demonstration.

George Koler.....	Pinnacle Mine
James Reary.....	Pinnacle Mine
Don Young.....	Pinnacle Mine
Joe Matthews, Jr.....	Oak Hills Mine
Edward Gibbney.....	Oak Hills Mine

LEGAL OPINION

May 26, 1930.

Mr. James Dalrymple,
State Inspector of Coal Mines,
State Office Building,
Denver, Colorado.

Dear Sir:

In reply to your letter of the 19th inst., in reference to the question as to whether you are compelled by law to employ another Deputy Inspector to fill the vacancy caused by the resignation of Deputy Inspector Thomas Allen, to take effect June 25, beg to advise that, in our opinion, you are required by statute to employ six deputy inspectors at all times.

Sec. 3465, C. L. 1921, provides:

"The chief inspector is hereby authorized and **directed** to divide the state into six inspection districts, dividing the work of coal mine inspection as nearly as possible into six equal parts."

Sec. 3466, C. L. 1921, provides:

"Each deputy inspector of coal mines **shall** be assigned to **one** of the **six** coal mining districts of the state; he shall reside in his district and shall devote his entire time to the duties of his office."

Sec. 3471 provides:

"When a vacancy occurs in the office of deputy inspector, the chief inspector of coal mines **shall** fill the same by appointment from the names on the certified list on file in the offices of the chief inspector of coal mines and the secretary of state."

From the foregoing it is clear that six public offices were created by the coal mine inspection act, in addition to the one of chief inspector, and the general rule is that a public office must be filled. We have no doubt that should you fail to fill this

vacancy, the person whose name is first on the list for deputy inspector could compel his appointment by suitable court action.

Very truly yours,

ROBERT E. WINBOURN,
Attorney General.

By FRED A. HARRISON,
Assistant Attorney General.

NUMBER INJURED IN COAL MINES DURING THE CALENDAR YEAR
ENDING DECEMBER 31, 1930

CAUSES	(A) Permanent Total Disability	(B) Permanent Partial Disability	(C) Temporary Disability		Total Injuries
			Time Lost More Than 14 Days	Time Lost Less Than 14 Days	
Underground					
1. Falls of roof (coal, rock, etc.).....	151	97	248
2. Falls of face or pillar coal.....	..	2	99	80	181
3. Mine cars and locomotives.....	..	2	211	145	358
4. Gas explosions and burning gas.....	6	..	6
5. Coal-dust explosions (including gas and dust combined).....
6. Explosives	2	2	4
7. Suffocation from mine gas.....
8. Electricity	6	7	13
9. Animals	23	27	50
10. Mining machines.....	..	3	54	41	98
11. Mines fires (burned, suffocated, etc.)...
12. Other causes.....	..	6	195	240	441
In Shaft:					
13. Falling down shafts or slopes.....
14. Objects falling down shafts or slopes..	1	..	1
15. Cages or skips.....
16. Other causes.....	1	..	1
Total number injured in mine.....	..	13	749	639	1,401
On Surface:					
17. Mine cars and mine locomotives.....	16	5	21
18. Electricity
19. Machinery	1	12	8	21
20. Boiler explosions or bursting steam pipes	1	..	1
21. Railway cars and locomotives.....	..	1	..	4	5
22. Other causes.....	..	1	35	37	73
Total number injured on the surface	..	3	64	54	121
Grand Total.....	..	16	813	693	1,522

A. PERMANENT TOTAL DISABILITY. Loss of both legs or arms, one leg and one arm, total loss of eyesight, paralysis or other condition permanently incapacitating workman from doing any work of a gainful occupation.

B. PERMANENT PARTIAL DISABILITY. Loss of one foot, leg, hand, eye, one or more fingers, one or more toes, and dislocation where ligaments are severed, or any other injury known in surgery to be permanent partial disability.

C. In this column include only accidents which cause a loss of time more than the balance of the day or shift upon which the accident occurred.

DIRECTORY OF COAL MINES IN THE STATE OF COLORADO FOR THE YEAR ENDED DECEMBER 31, 1930

SHOWING BY COMPANIES: TOTAL NUMBER OF TONS PRODUCED AND NUMBER OF MEN EMPLOYED; NUMBER OF FATAL ACCIDENTS; NUMBER OF MEN EMPLOYED PER FATAL ACCIDENT AND NUMBER OF TONS PRODUCED PER FATAL ACCIDENT; NUMBER OF NON-FATAL ACCIDENTS; NUMBER OF MEN EMPLOYED PER NON-FATAL ACCIDENT AND NUMBER OF TONS PRODUCED PER NON-FATAL ACCIDENT; NUMBER KILLED PER 1,000 EMPLOYED AND NUMBER OF MEN INJURED PER 1,000 EMPLOYED.

COMPANIES	Total Production	No. of Men Employed	No. of Fatal Accidents	No. of Men Employed Per Fatal Accident	No. of Tons Produced Per Fatal Accident	No. of Non- Fatal Accidents	No. of Men Em- ployed Per Non- Fatal Accident	No. of Tons Produced Per Non-Fatal Accident	Killed Per 1,000 Employed	Injured Per 1,000 Employed
Ainsworth, H. A.....	515	1	2	74.5	52,715	25	6.0	4,217	13.4	167.8
Alamo Coal Co.....	105,430	149	..	..	..	11	3.8	3,737	..	260.9
Allan, David.....	41,110	42	..	..	..	14	15.9	11,301	..	62.8
American Smelting & Ref. Co.....	158,219	223	..	..	..	..	..	..	..	..
Amos Coal Co.....	195	1	..	..	..	..	..	..	..	..
Anchor Coal Co.....	392	2	..	..	..	..	..	..	..	..
Anchor Fuel Co.....	1,171	2	..	..	..	..	..	..	..	..
Appleton Coal Co.....	734	3	..	..	..	3	17.3	9,577	..	57.7
Aztec Coal Mining Co.....	28,732	52	..	..	..	..	..	..	..	..
Babb, J. J.....	94	3	..	..	..	..	..	..	..	..
Babson Coal Co.....	2,623	3	..	..	..	..	..	..	..	..
Bainton, John.....	261	1	..	..	..	..	..	..	..	..
Baldwin Fuel Co.....	1,491	5	..	..	..	..	..	..	..	..
Barbour Coal Co.....	100,046	121	1	121.0	100,046	21	5.8	4,764	8.3	173.6
Barker, Wright.....	947	3	..	..	..	..	..	..	..	..
Barnell, Geo. M.....	3,774	4	..	..	..	1	4.0	3,774	..	250.0
Baudino & Co.....	3,308	3	..	..	..	..	..	..	..	..
Bear Canon Coal Co.....	38,574	77	1	77.0	38,574	4	19.3	9,644	13.0	51.9
Bear River Coal Co.....	52,569	69	..	..	..	13	5.3	4,044	..	188.4
Beer Coal Co.....	4,035	10	..	..	..	3	3.3	1,345	..	300.0
Bellodi, Angelo.....	84	1	..	..	..	..	..	..	..	..
Bird Brothers.....	250	1	..	..	..	..	..	..	..	..

[illegible]

Gabriella, T. & Sons.....	356	4	....	....	1	4.0	356	....	250.0
Gadberry, R. V.....	463	2	....	....	....	....	....	....	200.0
Garfield Coal Co.....	8,034	10	....	....	2	5.0	4,017	....	166.7
Gearhart, B. & Sons.....	1,423	6	....	....	1	6.0	1,423	....	....
George, Sam & Sons.....	1,572	4	....	....	....	....	....	....	....
Gilson Asphaltum Co.....	9,281	9	....	....	2	4.5	4,641	....	222.2
Girardo, Tony.....	500	2	....	....	....	....	....	....	....
Giuliano Coal Co.....	4,548	28	....	....	....	....	....	....	....
Golden Dawn Coal Co.....	463	3	....	....	....	....	....	....	....
Good Fuel Co.....	17,816	20	....	....	22	0.9	810	....	1100.0
Gordon Coal Co.....	47,744	92	....	....	2	46.0	23,872	....	21.7
Gray, L. J.....	358	1	....	....	....	....	....	....	....
Green Valley Coal Co.....	7,120	4	....	....	1	4.0	7,120	....	250.0
Griffiths Coal Co.....	8,786	12	....	....	3	4.0	2,929	....	250.0
Groble Bros.....	834	2	....	....	....	....	....	....	....
Harrington Coal Co.....	190	1	....	....	....	....	....	....	....
Hayden Coal Co.....	119,940	146	....	73.0	21	6.9	5,711	13.8	143.8
Highview Coal Co.....	2,665	5	....	....	1	5.0	2,665	....	200.0
Hidden Treasure Coal Co.....	1,959	3	....	....	....	....	....	....	....
Hollingsworth, John.....	47	2	....	....	....	....	....	....	....
Home Fuel & Supply Co.....	4,313	6	....	....	....	....	....	....	....
Horton, R. J.....	258	2	....	....	....	....	....	....	....
Huerfano Coal Co.....	57,223	110	1	110.0	5	22.0	11,445	9.1	45.5
Hunter, J. B.....	65	2	....	....	....	....	....	....	....
Imperial Coal Co.....	195,927	155	....	....	21	7.4	9,330	....	135.5
Ince, Bud.....	180	2	....	....	....	....	....	....	....
Independent Coal Co.....	3,078	4	....	....	....	....	....	....	....
James Brothers Fuel Co.....	950	2	....	....	....	....	....	....	....
Jeffries Fuel Co.....	4,577	9	....	....	....	....	....	....	....
Jewell Collieries Corp.....	37,186	55	1	55.0	3	18.3	12,395	18.2	54.5
Joerger Coal Co.....	200	1	....	....	....	....	....	....	....
Jones Coal Co.....	1,107	2	....	....	....	....	....	....	....
Jones & Trachta.....	198	1	....	....	....	....	....	....	....
Juanita Coal & Coke Co.....	45,403	47	....	....	6	7.8	7,567	....	127.7
Julian, Louis.....	1,000	2	....	....	....	....	....	....	....
Keystone Coal Co.....	65,059	84	....	....	25	3.4	2,602	....	297.6
King & Mitchell.....	735	1	....	....	....	....	....	....	....
Kurie Coal Co.....	13,942	25	....	....	14	1.8	996	....	560.0

[illegible]

COMPANIES	Total Production	No. of Men Employed	Fatal Accidents	No. of Men Employed Per Fatal Accident	No. of Tons Produced Per Fatal Accident	No. of Non- Fatal Accidents	No. of Men Em- ployed Per Non- Fatal Accident	No. of Tons Produced Per Non-Fatal Accident	Killed Per 1,000 Employed	Injured Per 1,000 Employed
Taylor, Thomas W.	139	1	1	206.0	126,096	36	5.7	3,225	4.9	174.8
Temple Fuel Co.	126,096	206	1							
Thomas Coal Co.	587	2								
Thomas Mining Co.	2,035	6								
Tipotsch, Frank	650	1								
Torrid Coal Co.	16,133	35				5	7.0	3,227		142.9
Triangle Coal Co.	9,533	14				3	4.7	3,178		213.6
Twenty-ninth of July Coal Co.	45	2								
Ute Coal Co.	3,000	2								
Valdez Coal Co.	83	2								
Valley View Coal Co.	1,477	3								
Vickers Coal Co.	66,118	82	1	82.0	66,118	11	7.5	6,011	12.2	134.1
Victor-American Fuel Co.	653,525	882	3	291.0	217,842	201	4.4	3,251	3.4	227.9
Vigil, Jose S.	69	1								
Vowell, T. M.	150	1								
Walker, Alex	1,348	3								
White Ash Coal Co.	416	4								
Whitlock, E. E.	143	1								
Willden, J. W.	724	2								
Williams Coal Co.	1,894	4								
Wilson, James	1,845	6				1	6.0	1,845		166.7
Winton Coal Co.	259	2								
Yingling, Chas.	1,317	4								

Ziesenes, Henry	724	3	....	.....	.....	.....	.....	.....	.....	.....	.....
Zimmerman, E. H.	774	3	....	.....	.....	.....	.....	.....	.....	.....	.....
Zimmerman & Gwynn.	902	3									
Total	<u>8,238,094</u>	<u>10,683</u>	<u>36</u>	<u>296.75</u>	<u>228,836</u>	<u>1,522</u>	<u>7.0</u>	<u>5,413</u>	<u>3.38</u>	<u>142.47</u>	

SHOWING BY COUNTIES PRODUCTION OF 1930 IN PREPARED SIZES

Counties	Mine Run	Lump	Nut	Pea	Slack	Total Tons
Archuleta	948	.....	.....	.....	.....	948
Boulder	23,573	147,160	49,754	8,607	198,957	428,051
Delta	3,285	37,179	16,185	2,143	11,531	70,323
Dolores	6,085	.....	.....	.....	.....	6,085
Elbert	2,158	.....	.....	.....	.....	2,158
El Paso	71,982	78,742	58,409	3,644	132,567	345,344
Fremont	55,566	183,858	58,536	3,182	110,313	411,455
Garfield	23,492	4,767	3,130	1,100	1,352	33,841
Gunnison	326,744	78,671	16,676	1,162	75,471	498,724
Huerfano	407,264	428,239	159,506	14,467	365,015	1,374,491
Jackson	11,074	12,423	10,544	.....	14,721	48,762
Jefferson	51,313	31,988	7,136	7,840	23,708	121,085
La Plata	41,699	6,294	2,703	1,028	5,287	57,011
Las Animas	713,348	170,371	169,567	59,971	857,342	1,970,599
Mesa	35,792	24,563	7,321	3,557	25,104	96,337
Moffat	7,888	397	131	.....	29	8,445
Montezuma	6,456	.....	.....	.....	.....	6,456
Montrose	3,470	.....	.....	.....	.....	3,470
Ouray	585	363	146	70	16	1,180
Pitkin	270	1,460	.....	.....	12,281	14,011
Rio Blanco	2,037	3,303	306	29	629	6,304
Routt	91,582	337,432	142,771	27,976	238,040	837,801
San Miguel	1,433	.....	.....	.....	.....	1,433
Weld	35,451	750,648	166,289	110,001	831,391	1,893,780
Totals	1,923,495	2,296,958	869,110	244,777	2,903,754	8,238,094

NOTE—In the slack, some mines include Pea and others Nut and Pea coal. The Egg and Grate coal is included in the Nut coal. (The Egg and Grate coal reported is from Boulder, Las Animas, Routt and Weld counties.)

COAL MINE FATALITIES IN THE STATE OF COLORADO, CLASSIFIED BY CAUSE AND OCCUPATION, FOR YEAR ENDED
DECEMBER 31, 1930

CAUSES	UNDERGROUND AND SHAFT															Total Fatalities		
	Foreman	Assistant Foreman	Fire Bosses	Pick Miners	Machine Miners	Machine Runners and Scrapers	Shot Friers	Drivers and Runners	Motormen and Assistants	Doorboys and Helpers	Trackmen and Bratticemen	Timbermen and Rockmen	Pump and Pipemen	Electricians and Helpers	All Others		Total Underground	Surface Fatalities
Underground:																		
1. Falls of roof (coal, rock, etc.).....	1	..	..	4	3	1	..	..	..	..	..	2	..	..	..	1	11	11
2. Falls of face or pillar coal.....	..	..	..	1	4	..	..	..	..	..	..	1	..	..	..	2	7	7
3. Mine cars and locomotives.....	..	1	..	1	1	..	..	5	..	1	..	..	1	..	..	..	12	12
4. Gas explosions and burning gas.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
5. Coal-dust explosions (including gas and dust combined).....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
6. Explosives.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
7. Suffocation from mine gases.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
8. Electricity (shock or burns).....	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	2	2	2
9. Animals.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
10. Mining machines.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
11. Mine fires (burned, suffocated, etc.).....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
12. Other causes.....	..	..	..	1	..	..	..	1	..	..	..	..	1	..	..	1	1	1
Shaft:																		
13. Falling down shafts or slopes.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
14. Objects falling down shafts or slopes.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
15. Cages or skips.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
16. Other causes.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total underground.....	1	1	..	8	8	1	..	15	..	1	..	3	1	1	3	33	33	33
Surface:																		
17. Mine cars and mine locomotives.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
18. Electricity (shock or burns).....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	1	1
19. Machinery.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
20. Boiler explosions or bursting steam pipes.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	1	1
21. Railway cars and locomotives.....	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..
22. Other causes.....	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	3	3
Total.....	..	..	..	8	8	1	..	5	..	1	..	3	2	1	5	33	36	36
Grand total.....	1	1	..	8	8	1	..	5	..	1	..	3	2	1	5	33	36	36
Number employed in each occupation.....	155	59	128	3,768	3,425	424	107	661	193	50	197	224	87	81	294	9,853	1,561	1,561

SHOWING BY COUNTIES, MINES OPERATED, NAME OF OPERATOR AND ADDRESS OF MINE, CHARACTER OF COAL, NUMBER OF DAYS WORKED, AVERAGE NUMBER OF MEN EMPLOYED, TOTAL NUMBER OF TONS OF COAL PRODUCED IN 1930, AND CAPACITY OF MINE PER DAY IN TONS.

ARCHULETA COUNTY

Name of Mine	Name of Company	Mine Post Office	Character of Coal	Number of Days Worked	Average No. of Men Employed	Total Number of Tons Produced	Capacity of Mine per Day, Tons
Cox.....	T. L. Cox.....	Pagosa Springs...	Bituminous.....	260	2	563	3
Fitzgerald.....	Harrington Coal Co.....	Allison.....	Bituminous.....	70	1	190	....
Payan.....	Payan Bros.....	Arboles.....	Bituminous.....	60	1	120	....
McBroom.....	Chas. McBroom.....	Dkyle.....	Bituminous.....	85	1	75	....
Number	of Mines operated: 4.....	.....	.....	147	5	948	....

BOULDER COUNTY

Vulcan.....	Rocky Mountain Fuel Co.....	Lafayette.....	Sub-bituminous...	245.6	86	81,693	300
Industrial.....	Rocky Mountain Fuel Co.....	Superior.....	Sub-bituminous...	108.5	129	79,647	800
Standard.....	Rocky Mountain Fuel Co.....	Lafayette.....	Sub-bituminous...	182.3	44	49,066	300
Monarch No. 2.....	National Fuel Co.....	Broomfield.....	Sub-bituminous...	187.3	127	87,627	700
Crown.....	David Allan.....	Gorham.....	Sub-bituminous...	262	42	41,110	500
Centennial.....	Centennial Coal Co.....	Louisville.....	Sub-bituminous...	185.3	44	40,176	200
Black Diamond.....	Black Diamond Fuel Co.....	Boulder.....	Sub-bituminous...	277	20	23,744	150
Hi-Way.....	Louisville-Lafayette Coal Co.....	Louisville.....	Sub-bituminous...	247	33	16,974	350
Gorham.....	Domestic Coal Co.....	Boulder.....	Sub-bituminous...	175	4	2,778	50
Pluto.....	Domestic Coal Co.....	Boulder.....	Sub-bituminous...	36	4	222	100
High-View.....	High-View Coal Co.....	Gorham.....	Sub-bituminous...	216	5	2,665	23
Rocky Ridge.....	Fox Coal Co.....	Gorham.....	Sub-bituminous...	176	2	817	10
Sunrise.....	Tony Girardo.....	Marshall.....	Sub-bituminous...	175	2	500	25
Ross.....	New Ross Coal Co.....	Gorham.....	Sub-bituminous...	102	4	387	4

BOULDER COUNTY—Continued

Pine Cliff.....	Tom Gabriella.....	Gorham.....	Sub-bituminous...	40	4	356	10
Pittsburgh.....	Pittsburgh Coal Co.....	Gorham.....	Sub-bituminous...	48	2	289	10
Number	of Mines operated: 16.....	194.1	552	428,051

DELTA COUNTY

Kling.....	Juanita Coal & Coke Co.....	Bowie.....	Bituminous.....	74	47	45,403	1,000
Green Valley.....	Green Valley Coal Co.....	Cedaredge.....	Semi-bituminous...	301	4	7,120
Red Canon.....	Red Canon Coal Co.....	Cedaredge.....	Semi-bituminous...	246.3	6	5,789	50
Paonia.....	Paonia Farmers Coal Co.....	Paonia.....	Semi-bituminous...	182	4	4,010
Independent.....	Independent Coal Co.....	Cedaredge.....	Semi-bituminous...	204	4	3,078
Red Mountain.....	States Hall Coal Co.....	Cedaredge.....	Semi-bituminous...	234	4	2,394	40
States.....	States Hall Coal Co.....	Cedaredge.....	Semi-bituminous...	204	3	1,607	40
Burdick.....	Sypolt & Brown.....	Hotchkiss.....	Semi-bituminous...	150	1	318	30
Winton.....	Winton Coal Co.....	Austin.....	Semi-bituminous...	74	2	259	35
Owens.....	Owens & Sons.....	Hotchkiss.....	Semi-bituminous...	65	1	195
Reaux Creek.....	T. M. Vowell.....	Hotchkiss.....	Semi-bituminous...	60	1	150	10
Number	of Mines operated: 11.....	125.5	77	70,323

DOLORES COUNTY

North Star.....	New Mexico Lumber Co.....	McPhee.....	Sub-bituminous...	154	7	6,085
Number	of Mines operated: 1.....	154	7	6,085

ELBERT COUNTY

Mascot.....	Mascot Coal, Oil & Clay Co.....	Matheson.....	Sub-bituminous...	180	4	1,211
Wright.....	Wright Barker.....	Matheson.....	Sub-bituminous...	175	3	947	20
Number	of Mines operated: 2.....	177.8	7	2,158

EL PASO COUNTY

Name of Mine	Name of Company	Mine Post Office	Character of Coal	Number of Days Worked	Average No. of Men Employed	Total Num- ber of Tons Produced	Capacity of Mine per Day, Tons
Pikeview	Pikes Peak Fuel Co.	Pikeview	Sub-bituminous...	226	170	240,876	1,500
City Coal Mines.....	Colorado Springs Co.	Colorado Springs..	Sub-bituminous...	247	69	52,614	500
Corley	Corley Coal Co.	Colorado Springs..	Sub-bituminous...	241	30	26,474	300
Kurte	Kurte Coal Co.	Colorado Springs..	Sub-bituminous...	246	25	13,942	150
Franceville	Franceville Fuel Co.	Colorado Springs..	Sub-bituminous...	192.5	10	4,973	50
Climax	Danville Coal Co.	Colorado Springs..	Sub-bituminous...	190.5	5	2,682	....
Jimmy Camp.....	Thomas Mining Co.	Colorado Springs..	Sub-bituminous...	214	6	2,035	20
Drennan	Drennan Coal Co.	Colorado Springs..	Sub-bituminous...	204	2	1,285	....
Golden Dawn.....	Golden Dawn Coal Co.	Yoder	Sub-bituminous...	107	3	463	....
Number	of Mines operated: 9 .....	.....	.....	227.4	320	345,344	....

FREMONT COUNTY

Chandler.....	Victor-American Fuel Co.	Chandler.....	Bituminous.....	227.8	296	170,691	1,000
Rockvale.....	Colorado Fuel & Iron Co.	Rockvale.....	Bituminous.....	128.7	234	81,683	800
Nonac.....	Colorado Fuel & Iron Co.	Canon City.....	Bituminous.....	153.5	29	25,983	250
Canon.....	Canon-Reliance Coal Co.	Canon City.....	Bituminous.....	156	46	56,043	500
Bluff Springs No. 2.....	Bluff Springs Leasing Co.	Florence.....	Bituminous.....	210	29	12,073	....
Bluff Springs No. 1.....	Guiliano Coal Co.	Coal Creek.....	Bituminous.....	158	14	4,348	25
New Fremont.....	Guiliano Coal Co.	Coal Creek.....	Bituminous.....	30	14	200	....
Brookside.....	Orechio Coal Mining Co.	Florence.....	Semi-bituminous..	247	13	10,184	35
Double Dick.....	Double Dick Coal Co.	Coal Creek.....	Bituminous.....	252	19	10,150	150
Canon Imperial.....	Canon Imperial Coal Co.	Florence.....	Bituminous.....	201	18	9,791	50
Griffiths.....	Griffiths Coal Mining Co.	Canon City.....	Semi-bituminous..	224	12	8,786	75
South Magnet.....	Canon Quality Coal Co.	Rockvale.....	Bituminous.....	205	16	4,221	....

FREMONT COUNTY—Continued

Jack O'Lantern.....	Beer Coal Co.....	Florence.....	Bituminous.....	242	10	4,035	30
Ellsworth.....	Ellsworth Canon Coal Co.....	Canon City.....	Bituminous.....	171	15	3,681	20
Rocchio.....	Rocchio Coal Co.....	Coal Creek.....	Semi-bituminous..	197	6	3,568	25
Canon District.....	Canon District Coal Co.....	Canon City.....	Bituminous.....	110	6	2,214	30
North Magnet.....	Periho Coal Co.....	Florence.....	Bituminous.....	126	5	1,491	...
Willie No. 2.....	James Bros. Fuel Co.....	Florence.....	Bituminous.....	300	2	950	5
Brewster.....	Canon Colorado Coal Co.....	Florence.....	Bituminous.....	49	6	586	...
Newlan.....	F. V. Bloom.....	Florence.....	Bituminous.....	80	4	485	...
Willie No. 1.....	Paul Carstia.....	Florence.....	Bituminous.....	120	1	250	2
Superior.....	H. J. Smith.....	Florence.....	Bituminous.....	60	2	42	5
Number	of Mines operated: 22.....	.....	.....	184.5	847	411,455	....

GARFIELD COUNTY

New Castle.....	New Castle Coal Co.....	Glenwood Springs..	Bituminous.....	258	8	10,948	....
Carbonera.....	Gilson Asphaltum Co.....	Mack.....	Bituminous.....	176	9	9,238	60
South Canon.....	South Canon Mine Leasing.....	Glenwood Springs..	Bituminous.....	243	10	5,687	75
North Canon.....	Rifle Coal Mines, Inc.....	Rifle.....	Bituminous.....	265.5	3	2,715	25
Rauman.....	Rauman Coal Co.....	Rifle.....	Bituminous.....	204	3	1,360	....
Silt.....	Morgan Coal Co.....	Silt.....	Bituminous.....	244.5	3	1,180	15
McLarn.....	Crumpley Sons Coal Co.....	Rifle.....	Bituminous.....	220	2	1,017	...
Ohkraut.....	Frank Deboy.....	Glenwood Springs..	Bituminous.....	130	1	845	...
Ziesentus.....	Henry J. Ziesentus.....	Rifle.....	Bituminous.....	96	3	724	20
Paradise.....	Angelo Bellodi.....	Glenwood Springs..	Bituminous.....	75	1	84	....
Number	of Mines operated: 10.....	.....	.....	212.4	43	33,841	....

GUNNISON COUNTY

Somerset.....	Calumet Fuel Co.....	Somerset.....	Bituminous.....	182.5	120	182,664	1,500
Crested Butte.....	Colorado Fuel & Iron Co.....	Crested Butte.....	Bituminous.....	172.4	168	150,747	1,250
Oliver.....	Oliver Coal Co.....	Somerset.....	Semi-Anthracite..	254	67	48,009	500
Horace.....	Columbine Anthracite Co.....	Crested Butte.....	Anthracite.....	188.5	82	46,396	400
Bulkeley No. 2.....	Crested Butte Coal Co.....	Crested Butte.....	Bituminous.....	144	42	32,890	400

GUNNISON COUNTY—Continued

Name of Mine	Name of Company	Mine Post Office	Character of Coal	Number of Days Worked	Average No. of Men Employed	Total Num- ber of Tons Produced	Capacity of Mine per Day, Tons
Alpine.....	Rocky Mountain Fuel Co.....	Baldwin.....	Semi-bituminous..	97	57	28,737	350
Ohio Creek.....	Ohio Creek Coal Co.....	Gunnison.....	Bituminous.....	116	12	6,563	100
Castle Rock.....	Castle Rock Coal Co.....	Gunnison.....	Bituminous.....	85	5	1,015	8
Baldwin Star.....	Baldwin Fuel.....	Baldwin.....	Bituminous.....	73	5	1,491	50
Richardson.....	Richardson Coal Co.....	Gunnison.....	Bituminous.....	76	2	212	3
Number	of Mines operated: 10.....	.....	.....	173.7	560	498,724	....

HUERFANO COUNTY

Robinson No. 1.....	Colorado Fuel & Iron Co.....	Walsen.....	Semi-bituminous..	156.8	239	181,301	1,000
Pictou.....	Colorado Fuel & Iron Co.....	Pictou.....	Bituminous.....	144.7	238	159,610	1,400
Cameron.....	Colorado Fuel & Iron Co.....	Farr.....	Bituminous.....	132.7	227	156,825	1,100
Keble No. 2.....	Colorado Fuel & Iron Co.....	Tioga.....	Bituminous.....	214.9	116	115,376	850
Calumet No. 1.....	Calumet Fuel Co.....	Delcarbon.....	Bituminous.....	201	210	166,075	830
Calumet No. 2.....	Calumet Fuel Co.....	Delcarbon.....	Bituminous.....	192.5	87	82,775	410
Alamo.....	Alamo Coal Co.....	Alamo.....	Bituminous.....	233	149	105,430	1,000
Alamo No. 2.....	Barbour Coal Co.....	Alamo.....	Bituminous.....	224	121	100,046	1,000
Oakdale.....	Oakdale Coal Co.....	Oakview.....	Bituminous.....	166.5	53	30,496	300
Ravenwood.....	Caliente Coal Co.....	Ravenwood.....	Bituminous.....	173	130	55,720	400
Maitland.....	Caliente Coal Co.....	Maitland.....	Bituminous.....	84.5	52	19,362	300
Pryor.....	Pryor Coal Mining Co.....	Pryor.....	Bituminous.....	194.7	77	53,373	400
Gordon.....	Gordon Coal Co.....	Gordon.....	Bituminous.....	100	92	47,744	450
Toltec.....	Azteco Coal Mining Co.....	Toltec.....	Bituminous.....	123.5	52	28,732	300
Mutual.....	Mutual Coal Co.....	Walsenburg.....	Bituminous.....	146.5	62	21,386	300
Ojo Canon.....	Peachey Coal Co.....	La Veta.....	Bituminous.....	141	29	18,030	150
Torrid.....	Torrid Coal Co.....	Rugby.....	Bituminous.....	157	35	16,133	300

HUERFANO COUNTY—Continued

Vesta (Carbonado).....	Minnequa Fuel Co.....	Walsenburg.....	Bituminous.....	76	40	8,785	250
Punker Hill.....	Steve Mattivi & Sons.....	Rapson.....	Bituminous.....	180	4	2,160	25
Pacific.....	Pacific Coal Mining Co.....	Walsenburg.....	Bituminous.....	29	58	1,995	....
George.....	Sam George & Sons.....	La Veta.....	Bituminous.....	192	4	1,572	10
Black Hawk.....	Black Hawk Coal Co.....	Aguilar.....	Bituminous.....	188	2	1,043	10
Caddell.....	Black Canon Coal & Fuel Co..	Walsenburg.....	Bituminous.....	110	2	522	....
Number	of Mines operated: 23.....	.....	.....	161.5	2,119	1,374,491	....

JACKSON COUNTY

Moore No. 1.....	North Park Coal Co.....	Coalmont.....	Semi-bituminous..	220	39	44,208	....
Marr.....	George M. Barnell.....	Walden.....	Semi-bituminous..	205	4	3,774	30
Conrad.....	Conrad Coal Co.....	Walden.....	Semi-bituminous..	190	1	462	5
Monahan.....	Bird Bros.....	Walden.....	Sub-bituminous...	125	1	250	....
Mitchell.....	George W. Davidson.....	Walden.....	Sub-bituminous...	22	1	68	....
Number	of Mines operated: 5.....	.....	.....	211.7	46	48,762	....

JEFFERSON COUNTY

Leyden No. 3.....	Leyden Lignite Co.....	Leyden via Golden.....	Sub-bituminous...	243.5	77	105,562	750
Christensen (Littleton).....	Good Fuel Co.....	Littleton.....	Sub-bituminous...	214	20	17,816	175
Blue Bird (Sharon).....	Blue Bird Mining, Inc.....	Morrison.....	Sub-bituminous...	67	13	707	30
Number	of Mines operated: 3.....	.....	.....	217.3	110	121,085	....

LA PLATA COUNTY

San Juan.....	American Smelting & Ref. Co..	Durango.....	Bituminous.....	156	28	13,257	150
Triangle.....	Triangle Coal Co.....	Durango.....	Bituminous.....	159.5	14	9,533	....
Castle.....	Castle Coal Co.....	Durango.....	Bituminous.....	291	7	8,560	50
O. K.....	O. K. Coal Co.....	Durango.....	Bituminous.....	202	9	5,571	75

LA PLATA COUNTY—Continued

Name of Mine	Name of Company	Mine Post Office	Character of Coal	Number of Days Worked	Average No. of Men Employed	Total Num- ber of Tons Produced	Capacity of Mine per Day, Tons
Sunshine.....	Sunshine Coal Co.....	Durango.....	Bituminous.....	167	5	4,375	40
Black Diamond.....	Black Diamond Coal Co.....	Durango.....	Bituminous.....	113	7	3,519	75
Morning Star.....	Baudino & Co.....	Durango.....	Bituminous.....	207	3	3,308	16
Durango.....	Durango Coal Co.....	Durango.....	Bituminous.....	104	11	3,165	25
Valley View.....	Valley View Coal Co.....	Mancos.....	Bituminous.....	175	3	1,477	....
Morning Glory.....	Chas. Yingling.....	Bayfield.....	Bituminous.....	132	4	1,347	20
Tipotsch.....	Frank Tipotsch.....	Hesperus.....	Bituminous.....	139	1	1,650	....
Excelsior.....	Dan Richardson.....	Bayfield.....	Bituminous.....	194	1	489	....
G. & G.....	R. V. Gadberry.....	Hesperus.....	Bituminous.....	60	2	463	....
Peerless.....	Peerless Coal Co.....	Durango.....	Bituminous.....	13	6	425	....
Soda Springs.....	Pt. Lewis Mesa Farmers Coal Co.....	Kline.....	Sub-bituminous...	75	2	324	10
Pine River.....	Pine River Coal Co.....	Bayfield.....	Bituminous.....	92	1	309	....
Shamrock.....	Thos. W. Taylor.....	Bayfield.....	Bituminous.....	75	1	139	....
Hammond.....	M. F. Leonard.....	Bayfield.....	Bituminous.....	160	1	70	....
Crawford.....	H. J. Rasmussen.....	Hesperus.....	Bituminous.....	30	1	30	....
Number	of Mines operated: 19.....	.....	.....	147	107	57,011	....

LAS ANIMAS COUNTY

Frederick.....	Colorado Fuel & Iron Co.....	Valdez.....	Bituminous.....	182.5	465	385,924	2,100
Morley.....	Colorado Fuel & Iron Co.....	Morley.....	Bituminous.....	166.7	450	302,561	1,800
Toller.....	Colorado Fuel & Iron Co.....	Tollerburg.....	Bituminous.....	301.4	278	248,660	1,325
Tabasco.....	Colorado Fuel & Iron Co.....	Berwind.....	Bituminous.....	31	200	31,042	1,000
Delagua.....	Victor-American Fuel Co.....	Delagua.....	Bituminous.....	229	345	327,320	2,000

LAS ANIMAS COUNTY—Continued

Boncarbo.....	American Smelting & Ref. Co.	Cokedale.....	Bituminous.....	170	195	144,962	1,200
Brodhead No. 9.....	Temple Fuel Co.....	Brodhead.....	Bituminous.....	200	206	126,996	700
Kenneth.....	Vickers Coal Co.....	Rugby.....	Bituminous.....	210	82	66,118	500
Empire.....	Empire Coal M. Co.....	Agular.....	Bituminous.....	138.6	89	77,802	600
Ludlow.....	Huerfano Coal Co.....	Ludlow.....	Bituminous.....	137	110	57,223	600
Bear Canon No. 6.....	Bear Canon Coal Co.....	Valloroso.....	Bituminous.....	124	77	38,574	....
Creston.....	Jewel Collieries Corp.....	Agular.....	Bituminous.....	171	55	37,186	200
Dix.....	Dick Coal Co.....	Dicks.....	Bituminous.....	119	34	28,782	450
Royal.....	Royal Fuel Co.....	Agular.....	Bituminous.....	31.4	127	18,507	800
Thor.....	National Fuel Co.....	Trinidad.....	Bituminous.....	65.1	67	15,825	300
Rapson.....	Pio Michell.....	Rapson.....	Bituminous.....	250	40	15,516	250
Sopris.....	Deldosso Coal Co.....	Sopris.....	Bituminous.....	218	24	15,338	45
Anchor (Eureka).....	Phoenix Fuel Co.....	Trinidad.....	Bituminous.....	86.5	40	10,515	200
Jeffrey.....	Jeffrey Fuel Co.....	Trinidad.....	Bituminous.....	231	9	4,577	60
Bowen.....	Home Fuel & Supply Co.....	Trinidad.....	Bituminous.....	256.5	6	4,313	15
La Belle.....	Wm. Morgan.....	Trinidad.....	Bituminous.....	156	8	2,672	....
Engle.....	James Wilson.....	Trinidad.....	Bituminous.....	107	6	1,845	50
Santa Fe.....	Santa Fe Coal Co.....	Trinidad.....	Bituminous.....	87	3	1,331	....
Baldy.....	Anchor Fuel Co.....	Trinidad.....	Bituminous.....	98	2	1,171	25
Lakeview.....	Nick Riggo.....	Trinidad.....	Bituminous.....	85	2	1,084	....
Fairview.....	Louis Julian.....	Trinidad.....	Bituminous.....	200	2	1,000	5
Fishers Peak.....	Marsh Coal Co.....	Trinidad.....	Bituminous.....	284	2	986	....
Davich.....	Davich Coal Co.....	Rapson.....	Bituminous.....	126	2	871	....
Pritchard.....	Charles Pritchard.....	Trinidad.....	Bituminous.....	196	2	667	15
Pickford.....	Boaglio Coal Co.....	Trinidad.....	Bituminous.....	75	2	527	2
Bunker Hill No. 2.....	O. C. Cook.....	Rapson.....	Bituminous.....	23	8	508	....
Martinez.....	R. Martinez.....	Cokedale.....	Bituminous.....	197	1	331	....
Prospect.....	W. D. Owen.....	Trinidad.....	Bituminous.....	135	2	226	10
Beshoar.....	Joerger Coal Co.....	Trinidad.....	Bituminous.....	60	1	200	5
Peacock.....	Brown & Putaturo.....	Trinidad.....	Bituminous.....	50	1	95	....
New Congo.....	Valdez Coal Co.....	Agular.....	Bituminous.....	55	2	83	10
Vigil.....	Jose S. Vigil.....	Valdez.....	Bituminous.....	50	1	69	....
Ferrill.....	John Hollingsworth.....	Trinidad.....	Bituminous.....	30	2	47	....
29th of July.....	29th of July Coal Co.....	Agular.....	Bituminous.....	12	2	45	....
or Mines operated: 39				167.2	2,950	1,970,599	
Number							

MESA COUNTY

Name of Mine	Name of Company	Mine Post Office	Character of Coal	Number of Days Worked	Average No. of Men Employed	Total Num- ber of Tons Produced	Capacity of Mine per Day, Tons
Cameo.....	McNeil Coal Corporation.....	Cameo.....	Semi-bituminous..	175	49	48,096	600
Palisade.....	Palisade Coal & Supply Co....	Palisade.....	Semi-bituminous..	193	18	12,663	150
Garfield.....	Garfield Coal Co.....	Palisade.....	Semi-bituminous..	204	6	8,034	100
Winger.....	Clark Coal Co.....	Palisade.....	Semi-bituminous..	190	10	4,583	60
Stove Canon.....	Store Canon Mine Co.....	Fruita.....	Bituminous.....	184	4	3,207	50
Riverside.....	Riverside Coal Co.....	Palisade.....	Semi-bituminous..	178	5	2,803	....
P. V.....	Louis Lesser Coal Co.....	Cameo.....	Anthracite.....	150	2	2,150	4
Stokes.....	W. D. Stokes.....	Palisade.....	Semi-bituminous..	96	6	2,141	80
Hidden Treasure.....	Hidden Treasure Coal Co....	Fruita.....	Bituminous.....	225	3	1,959	20
Williams.....	Williams Coal Co.....	Grand Junction...	Semi-bituminous..	189	4	1,894	20
Mt. Garfield.....	B. Gearhart & Sons.....	Palisade.....	Semi-bituminous..	78	6	1,423	30
Farmers Mutual.....	Farmers Mutual Coal Co....	Grand Junction...	Semi-bituminous..	186	4	1,402	25
Midwest.....	Midwest Development Corp..	Palisade.....	Bituminous.....	167	4	1,228	20
McGinley.....	McGinley Coal Co.....	Grand Junction...	Semi-bituminous..	130	2	1,028	....
Mt. Lincoln.....	Mt. Lincoln Coal Co.....	Palisade.....	Semi-bituminous..	210	3	1,009	....
Corcoran.....	Appleton Coal Co.....	Grand Junction...	Bituminous.....	136	3	734	20
Peacock.....	Peacock Coal Co.....	Grand Junction...	Semi-bituminous..	100	3	700	4
Thomas.....	Thomas Coal Co.....	Grand Junction...	Semi-bituminous..	150	2	587	20
Anchor No. 1.....	Anchor Coal Co.....	Fruita.....	Bituminous.....	70	2	392	25
Coal Gulch.....	F. R. Durham.....	Loma.....	Semi-bituminous..	90	2	138	....
Nearing (Liberty).....	Liberty Coal Co.....	Fruita.....	Semi-bituminous..	40	2	101	....
Hunter.....	J. B. Hunter.....	Fruita.....	Semi-bituminous..	20	2	65	....
Number	of Mines operated: 22.....	.....	.....	164.5	142	96,337	.....

MOFFAT COUNTY

Ute (Collom).....	Ute Coal Co.....	Axial.....	Bituminous.....	150	2	3,000	8
Blair.....	Blair Coal Co.....	Craig.....	Sub-bituminous...	200	2	1,730	20
Shaver.....	Phelan & Shaver.....	Axial.....	Bituminous.....	250	2	1,514	20
Evans.....	Groblebe Bros.....	Craig.....	Sub-bituminous...	133	2	834	....
Hart.....	Martin & Sons.....	Craig.....	Sub-bituminous...	129	2	589	....
Little Bear.....	Little Bear Coal Co.....	Craig.....	Sub-bituminous...	120	3	445	....
Whitlock.....	E. E. Whitlock.....	Hamilton.....	Bituminous.....	200	1	143	....
Square Deal.....	Chas. H. Taylor.....	Craig.....	Sub-bituminous...	90	1	96	....
Baker.....	J. J. Fabb.....	Craig.....	Sub-bituminous...	19	3	94	....
Number	of Mines operated: 9.....	.....	.....	135.1	18	8,445	.....

MONTEZUMA COUNTY

School Section Lease...	Mancos Coal & Fuel Co.....	Mancos.....	Bituminous.....	213	3	1,754	20
Mesa Verde.....	G. B. Cushman.....	Cortez.....	Bituminous.....	165	3	1,134	....
Cortez.....	Cortez Coal Co.....	Cortez.....	Semi-Bituminous..	244	2	1,026	....
Willden.....	Willden Coal Co.....	Mancos.....	Semi-Anthracite...	246	2	724	....
Spencer.....	Geo. S. Spencer.....	Mancos.....	Semi-Bituminous..	200	1	626	....
Pinos Altos.....	H. A. Ainsworth.....	Mancos.....	Semi-Bituminous..	145	1	515	6
Black Ace.....	George Stakish.....	Lewis.....	Bituminous.....	135	2	497	6
Bud Ince.....	Bud Ince.....	Lebanon.....	Bituminous.....	90	2	180	2
Number	of Mines operated: 8.....	.....	.....	181.8	16	6,456	.....

MONTROSE COUNTY

Piddlin Bill.....	Rare Metals Corporation.....	Naturita.....	Bituminous.....	250	6	1,913	40
Liberty Bell.....	King & Mitchell.....	Nucula.....	Anthracite.....	200	1	735	6
Pleasant Valley.....	Chas. R. Rice.....	Nucula.....	Bituminous.....	121	2	335	4
Independence.....	W. J. Oberding.....	Nucula.....	Bituminous.....	150	1	330	....
Cloverdale.....	C. E. Nix.....	Nucula.....	Bituminous.....	33	2	157	....
Number	of Mines operated: 5.....	.....	.....	179.6	12	3,470	.....

OURAY COUNTY

Name of Mine	Name of Company	Mine Post Office	Character of Coal	Number of Days Worked	Average No. of Men Employed	Total Num- ber of Tons Produced	Capacity of Mine per Day, Tons
Burro Creek.....	Burro Creek Coal Co.....	Ouray.....	Sub-bituminous....	118	4	720	.... 4
Columbine.....	Lowery & Spencer.....	Ridgway.....	Sub-bituminous....	60	2	460	.... 4
Number	of Mines operated: 2.....	.....	.....	98.6	6	1,180	.....

PITKIN COUNTY

Placita.....	Placita Coal Mining Co.....	Placita.....	Bituminous.....	196	19	14,011	100
Number	of Mines operated: 1.....	.....	.....	196	19	14,011	.....

RIO BLANCO COUNTY

Pollard.....	Electric Coal Co.....	Meeker.....	Bituminous.....	192	3	1,651	50
Oldland.....	Electric Coal Co.....	Meeker.....	Bituminous.....	123	3	604	10
McKee.....	Electric Coal Co.....	Meeker.....	Bituminous.....	163	1	524	....
Black Diamond.....	Electric Coal Co.....	Meeker.....	Bituminous.....	10	3	111	....
Lion Canon.....	Lion Canon Coal Co.....	Meeker.....	Bituminous.....	231	3	1,151	10
New Pollard.....	C. F. Pollard.....	Meeker.....	Bituminous.....	75	2	1,000	9
Nine Mile Hill.....	Thos. D. Foreman.....	Meeker.....	Bituminous.....	153	2	734	10
Douglass Creek.....	Jones & Trachta.....	Kangely.....	Bituminous.....	65	1	198	10
Ford.....	J. D. Ford.....	Rio Blanco.....	Bituminous.....	70	1	167	....
Fairfield.....	E. F. Fairfield.....	Meeker.....	Bituminous.....	60	1	107	....
Reinaw.....	R. C. Reinaw.....	Meeker.....	Bituminous.....	50	1	57	....
Number	of Mines operated: 11.....	.....	.....	120.5	21	6,304	.....

ROUTT COUNTY

Harris.		Mt. Harris.....	Bituminous.....	132	203	172,963	4,000
Oak Hills No. 1.		Oak Creek.....	Bituminous.....	2	90	3,665	....
Oak Hills No. 2.		Oak Creek.....	Bituminous.....	77	192	146,544	4,000
Arrowhead.		Oak Creek.....	Bituminous.....	66	23	8,377	300
Pinnacle.		Oak Creek.....	Bituminous.....	65.2	168	115,178	1,750
Wadge.		Mt. Harris.....	Bituminous.....	32.5	73	40,336	1,200
Hayden No. 3.		Haybro.....	Bituminous.....	114.6	146	119,940	1,500
Keystone.		Routt.....	Bituminous.....	117	84	65,059	1,000
Pinnacle-Kemmerer Fuel Co.		Mt. Harris.....	Bituminous.....	107	98	54,034	700
Bear River.		Bear River.....	Bituminous.....	98.5	69	52,569	1,000
McNeill.		McGregor.....	Bituminous.....	78.3	64	46,247	500
Babson.		Hayden.....	Bituminous.....	223	3	2,623	....
Argo.		Oak Creek.....	Bituminous.....	80	4	2,046	30
Hayden Valley.		Hayden.....	Sub-bituminous..	140	3	1,348	15
Ritchneg.		Bear River.....	Bituminous.....	180	1	1,200	14
Jones.		Bear River.....	Bituminous.....	232	2	1,107	15
Premium.		Miner.....	Bituminous.....	153	3	1,065	....
Seven Points.		Phillpsburg.....	Bituminous.....	78	3	902	100
Block.		Steamboat Spgs..	Semi-Anthracte..	88	3	774	50
Edna.		Oak Creek.....	Bituminous.....	128	1	620	30
Trout Creek.		Oak Creek.....	Bituminous.....	150	2	620	....
Walter.		Mt. Harris.....	Bituminous.....	51.5	1	261	8
Amos.		McGregor.....	Bituminous.....	75	1	195	....
Tom Chargo.		Oak Creek.....	Bituminous.....	35	1	103	....
Franz.		Deep Creek.....	Bituminous.....	30	1	25	....
Number		of Mines operated:		89.2	1,239	837,801	

SAN MIGUEL COUNTY

Gray.	L. J. Gray.	Norwood.	Sub-bituminous.	190	1	358
Elder.	Elder Coal Co.	Norwood.	Sub-bituminous.	223	2	314
Horton.	Horton Coal Co.	Norwood.	Sub-bituminous.	120	2	258
Marriott.	Wm. Marriott.	Norwood.	Sub-bituminous.	175	1	253
Royers.	Royers Coal Co.	Norwood.	Sub-bituminous.	120	1	250
Number	of Mines operated:			167.3	7	1,433

WELD COUNTY

Name of Mine	Name of Company	Mine Post Office	Character of Coal	Number of Days Worked	Average No. of Men Employed	Total Num- ber of Tons Produced	Capacity of Mine per Day, Tons
Columbine.....	Rocky Mountain Fuel Co.....	Serene.....	Sub-bituminous....	206	220	282,776	1,500
Grant.....	Rocky Mountain Fuel Co.....	Frederick.....	Sub-bituminous....	189	130	177,309	1,100
Boulder Valley.....	Boulder Valley Coal Co.....	Eric.....	Sub-bituminous....	168	168	324,661	2,000
Puritan.....	National Fuel Co.....	Frederick.....	Sub-bituminous....	184.7	214	257,310	2,000
Imperial.....	Imperial Coal Co.....	Erle.....	Sub-bituminous....	196	155	195,927	1,500
Clayton.....	Clayton Coal Co.....	Erle.....	Sub-bituminous....	143	189	176,539	1,500
Morrison.....	Clayton Coal Co.....	Erle.....	Sub-bituminous....	75	20	2,768	2,800
Baum.....	Consolidated Coal & Coke Co.	Dacona.....	Sub-bituminous....	207.9	99	142,214	1,000
Shamrock.....	Shamrock Coal Co.....	Frederick.....	Sub-bituminous....	178	75	103,179	600
Sterling.....	McNeil Coal Corp.....	Dacona.....	Sub-bituminous....	170	77	88,191	1,000
Russell.....	W. E. Russell Coal Co.....	Frederick.....	Sub-bituminous....	191.1	55	78,597	600
Liley.....	Liley Coal & Land Co.....	Frederick.....	Sub-bituminous....	261	47	63,893	400
White Ash.....	White Ash Coal Co.....	La Salle.....	Sub-bituminous....	150	4	416	....
Number	of Mines operated: 13.....	.....	.....	186	1,453	1,893,780	.....

STATE OF COLORADO

Total Number of Mines Operated.....	275
Total Number of Man-Days Worked.....	164.6
Total Number of Men Employed (Average).....	10,683
Total Number of Tons of Coal Produced.....	8,238,094

COAL MINE EMPLOYES CLASSIFIED BY OCCUPATION IN THE STATE
OF COLORADO DURING YEAR ENDED DECEMBER 31, 1930

		Employed in and Around the Mines of Colorado
*UNDERGROUND		
1. Foremen		155
2. Assistant foremen.....		59
3. Fire bosses.....		128
4. Pick miners.....		3,768
5. Machine miners.....		3,425
6. Machine runners and scrapers.....		424
7. Shot firers.....		107
8. Drivers and runners.....		661
9. Motormen and assistants.....		193
10. Doorboys and helpers.....		50
11. Trackmen and bratticemen.....		197
12. Timbermen and rockmen.....		224
13. Pumpmen and pipemen.....		87
14. Electricians and helpers.....		81
15. All others.....		294
Total underground.....		9,853
SURFACE		
1. Superintendents		105
2. Foremen		43
3. Blacksmiths and carpenters.....		144
4. Engineers and firemen.....		204
5. Machinists and helpers.....		70
6. Trackmen and helpers.....		35
7. All others at mine.....		851
9. Office employees.....		109
Total surface.....		1,561
Total employees.....		11,414
Number of days men worked during year.....		164.6

COAL PRODUCTION OF COLORADO FROM 1873 TO 1930,
INCLUSIVE

Year	Tons	Year	Tons
1873.....	69,977	1902.....	7,522,923
1874.....	87,372	1903.....	7,775,202
1875.....	98,838	1904.....	6,776,551
1876.....	117,666	1905.....	8,989,631
1877.....	160,000	1906.....	10,308,421
1878.....	200,630	1907.....	10,965,640
1879.....	322,732	1908.....	9,773,007
1880.....	375,000	1909.....	10,722,490
1881.....	706,744	1910.....	12,104,887
1882.....	1,161,479	1911.....	10,197,595
1883.....	1,220,593	1912.....	11,016,948
1884.....	1,130,024	1913.....	9,268,939
1885.....	1,398,796	1914.....	8,201,423
1886.....	1,436,211	1915.....	8,715,397
1887.....	1,791,735	1916.....	10,522,185
1888.....	2,185,477	1917.....	12,515,305
1889.....	2,400,629	1918.....	12,658,055
1890.....	3,075,781	1919.....	10,406,543
1891.....	3,512,632	1920.....	12,514,693
1892.....	3,771,234	1921.....	9,141,947
1893.....	3,947,056	1922.....	10,003,610
1894.....	3,021,028	1923.....	10,336,735
1895.....	3,339,495	1924.....	10,501,088
1896.....	3,371,933	1925.....	10,440,387
1897.....	3,565,660	1926.....	10,616,760
1898.....	4,174,037	1927.....	9,781,580
1899.....	4,826,939	1928.....	9,921,585
1900.....	5,495,734	1929.....	9,934,064
1901.....	6,021,405	1930.....	8,238,094

PRODUCTION BY COUNTIES BY MONTHS, 1930

Month	Archuleta	Boulder	Delta	Dolores	Elbert	El Paso	Fremont
January	68,412	9,347	1,596	414	54,217	65,930
February	40,115	5,663	955	180	30,946	41,614
March	36,324	5,522	911	251	37,067	17,818
April	18,348	1,489	541	19	19,907	6,700
May	20,460	2,810	500	...	20,871	35,250
June	15,311	2,747	476	...	13,591	20,026
July	16,254	2,481	252	...	13,945	23,550
August	24,516	3,265	253	...	15,283	19,360
September	43,169	7,222	276	...	20,688	32,267
October	46,876	7,317	325	...	33,037	50,411
November	42,081	10,253	...	...	38,384	48,472
December ..	948	56,185	12,207	...	1,294	47,408	50,057
Totals ..	948	428,051	70,323	6,085	2,158	345,344	411,455

Month	Garfield	Gunnison	Huerfano	Jackson	Jefferson	La Plata
January	5,340	47,818	242,569	6,236	10,877	7,809
February	3,730	36,526	127,962	5,205	8,261	5,930
March	2,590	25,158	70,549	2,167	10,142	3,629
April	1,724	20,500	58,478	2,165	9,266	3,353
May	1,757	31,366	92,931	2,642	9,242	2,924
June	1,111	30,570	70,921	2,044	7,041	3,229
July	1,200	38,165	94,076	2,468	8,363	3,383
August	1,601	35,348	81,747	2,788	7,973	3,412
September ...	2,810	55,929	110,338	4,548	8,736	5,209
October	3,837	63,213	153,819	7,075	11,909	5,728
November ...	3,878	54,164	137,438	5,301	12,551	4,683
December ...	4,263	59,967	133,663	6,123	16,724	7,722
Totals ..	33,841	498,724	1,374,491	48,762	121,085	57,011

Month	Las Animas	Mesa	Moffat	Montezuma	Montrose	Ouray
January ...	250,352	13,615	474	797	....	....
February ...	176,041	8,560	196	438	....	....
March	164,385	5,536	145	396	....	....
April	151,035	4,090	113	172	....	....
May	129,930	4,479	100	313	....	....
June	131,451	3,965	83	129	....	....
July	136,965	4,555	16	155	....	....
August	121,501	6,275	36	200	....	....
September ...	148,738	8,924	92	281	....	....
October ...	172,860	8,874	....	608	....	....
November ...	165,223	9,841	....	660	....	....
December ..	222,118	17,623	7,190	2,307	3,470	1,180
Totals ..	1,970,599	96,337	8,445	6,456	3,470	1,180

Month	Pitkin	Rio Blanco	Routt	San Miguel	Weld	Total
January ...	1,447	753	151,125	....	341,891	1,281,019
February ...	894	440	77,811	....	172,760	744,227
March	1,005	327	24,917	....	180,357	589,196
April	1,003	173	15,597	....	72,031	386,704
May	1,119	179	55,328	....	79,562	491,763
June	1,183	129	38,874	....	50,314	393,195
July	1,269	136	47,285	....	53,643	448,161
August	1,362	182	43,249	....	67,814	436,165
September ...	1,131	380	76,971	....	147,518	675,227
October ...	759	534	115,353	....	211,053	893,588
November ...	1,356	621	90,340	....	231,724	856,970
December ..	1,483	2,450	100,951	1,433	285,113	1,041,879
Totals ..	14,011	6,304	837,801	1,433	1,893,780	8,238,094

SHOWING INCREASE AND DECREASE BY COUNTIES 1929-1930

Counties	1929	1930	Increase	Decrease
Archuleta	408	948	540	.....
Boulder	479,643	428,051	.....	51,592
Delta	72,273	72,323	.....	1,950
Dolores	11,732	6,085	.....	5,647
Elbert	3,003	2,158	.....	845
El Paso.....	361,595	345,344	.....	16,251
Fremont	526,927	411,455	.....	115,472
Garfield	44,430	33,841	.....	10,589
Gunnison	521,401	498,724	.....	22,677
Huerfano	1,783,744	1,374,491	.....	409,253
Jackson	56,318	48,762	.....	7,556
Jefferson	98,755	121,085	22,330	.....
La Plata.....	74,464	57,011	.....	17,453
Las Animas.....	2,554,897	1,970,599	.....	594,298
Mesa	118,567	96,337	.....	22,230
Moffat	6,025	8,445	2,420	.....
Montezuma	6,663	6,456	.....	207
Montrose	1,278	3,470	2,192	.....
Ouray .....	.....	1,180	1,180	.....
Pitkin	18,757	14,011	.....	4,746
Rio Blanco.....	6,771	6,304	.....	467
Routt	1,006,740	837,801	.....	168,939
San Miguel.....	557	1,433	876	.....
Weld	2,169,116	1,893,780	.....	275,336
Total	9,934,064	8,238,094	.....	.....
Decrease				1,695,970

COKE PRODUCED IN 1930 BY COMPANIES AND COUNTIES

Companies	Total No. of Ovens Used	Total Tonnage	Counties	Total No. of Ovens Used	Total Tonnage
American Smelting and Refining Co...	160	79,373	La Plata.....	20	6,846
Colorado Fuel and Iron Co.....	135½	379,070	Las Animas...	140	72,527
			Pueblo	135½	379,070
Total	295½	458,443		295½	458,443

REMARKS:

Average number of days worked..... 309
 Average number of men employed at the coke ovens..... 76
 Number of tons of coal made into coke..... 687,800

LIST OF FATAL ACCIDENTS WHICH OCCURRED IN THE
COAL MINES OF COLORADO DURING THE
YEAR, 1930.

January 9—T. J. TURPIN, Scotch, machine miner, experience 2 years, age 36 years, married, two children, employed by the National Fuel Co., at the Puritan mine, Weld county, was killed by a fall of coal from face of room. A rib shot which was on the track side was partially standing, adhering somewhat to the coal roof. Deceased began to dig down the shot when the coal suddenly gave way, throwing him against a loaded car, injuring his head so severely that he died twenty minutes later. The night foreman had visited the place two hours earlier. The place was well timbered, also a temporary roadhead prop was set. The accident was a mishap and might have been less serious had the loaded car been removed before starting to take down the coal.

January 10—JOSEPH PICKLEMIER, Austrian, timberman experience 4 years, age 51 years, married, three children, employed by the Oakdale Coal Co., at Oakdale No. 2 mine, Huerfano county, was killed by a fall of coal and rock from the roof. All the work in this mine consists of pillars and stumps. Deceased was in the act of putting up a set of timbers when, without warning, the roof gave way breaking over the props and caught him, killing him. The place had been visited four hours prior to the accident by the mine foreman. The place was well timbered and a cross bar was being put up to permanently secure the roadway. The accident is classed as unavoidable.

January 11—WALTER LITTLE, American, pick miner, experience 20 years, age 38 years, single, employed by the Jewell Collieries Corp., at the Creston mine, Las Animas county, was killed by a fall of rock from roof. Deceased was mining at the face of his room when a rock gave way from an invisible slip in the roof breaking over the coal face. The place was visited by the mine foreman six hours prior to the accident. It was well timbered. The accident is classed as unavoidable.

January 13—CHRISTOPHER C. MELLOTT, American, rope-rider, experience 15 years, age 43 years, single, employed by the Alamo Coal Co., at the Alamo No. 1 mine, Huerfano county, was injured on the 11th inst. by being caught between cross bar and top of loaded car and died from the injuries sustained on the above date. Deceased was pulling a loaded car from a slant which pitches 25 degrees. The place is cross barred, all of uniform height. He stepped on front of load and told the assistant rope rider to bell it out. When the car started, he turned on the bumpers, his back towards the direction in which the car was running. He raised his head to look over the car and in doing so he was caught by a cross bar and pulled to the top of the car and injured so severely that he died from the effects. The accident was due to carelessness on part of deceased.

January 16—NICK GANOFF, Bulgarian, pick miner, experience 17 years, age 43 years, married, four children, employed by Fruth & Micheletti at the Premium mine, Routt county, was killed by a fall of roof rock. Deceased was in his room shoveling coal into a car when a rock fell on him killing him instantly. The place had been examined by a mine official the evening before the accident and deceased was instructed to put up a prop, which he neglected to do. The accident might have been avoided had deceased timbered his place as per agreement and put up a roadhead prop. The accident is charged partly to a lack of proper supervision of the mine management and to neglect by the deceased in failing to set a prop as instructed.

January 22—JOE SKUFCA, American, rope rider, experience 5 years, age 21 years, single, employed by the Victor-American Fuel Co., at the Wadge mine, Routt county, was caught between an empty pit car and prop and killed instantly. Deceased was supervising the dropping of cars from the slope into the parting. Apparently while cars were still in motion, he tried to uncouple some of them from the trip and he got caught between a car and prop. While there was sufficient clearance between the cars and the rib there was not enough between the car and prop. The roof condition at the point of accident is heavy, props were set up temporarily to hold up the roof until cross bars could be set. When this work was done all props were removed but this one and one other at the inby about 10 feet. These props are located between the tracks on the parting, which was used as a gathering parting. Deceased came to his death through negligence of the company in not having the required clearance between cars and timbers as required by law.

January 29—JOHN N. CHASE, American, assistant mine foreman, experience 15 years, age 40 years, married, two children, employed by the Clayton Coal Co., at the Clayton mine, Weld county, was caught between empty car and rib and was crushed to death. A trip of sixteen empty cars were being pulled into the parting and the mule jerked the first four cars off the track. Deceased being close at hand assisted in placing the cars back on the track and stood between the empty track and the rib watching the motorman and helper spot the remaining trip, when suddenly two cars derailed and caught deceased between the corner of one of the cars and the rib and caused such injuries that death was immediate. The accident was a mishap for which on one can be held responsible.

February 4—BATISTA MARINO, Italian, machine miner, experience 27 years, age 58 years, married, two children, employed by the Canon Quality Coal Co., at the South Magnet mine, Fremont county, was killed by a fall of rock. Deceased was working on the machine in a room about 12 feet from roadhead, when a rock fell from a slip near face of coal. Timbers were set about

5 ft. 6 in. from face. The place had been visited at 4:00 p. m. or shortly before accident. No responsibility is placed on anyone. It was unforeseen and therefore classed as unavoidable.

February 10—JOHN KAMBIC, American, machine miner, experience 2 years, age 19 years, single, employed by the Colorado Fuel & Iron Co., at the Robinson No. 1 mine, Huerfano county, was killed by a fall of rock. Deceased and his father were working a room pillar and were in the act of removing their tools from the face when a slip gave way, catching the former and killing him instantly. Both were aware of the slip as they had set one prop under the right hand side of it, but it was 13 ft. long and 5 ft. wide, extending on both sides of the roadhead. On questioning of deceased's father (partner) why they had not set props under the slip when they knew it was there, and he said they could not set the props as there would not have been room left for the machine to cut the place. The accident was due to a lack of experience and judgment on part of deceased and partner and also in not getting the proper timbering instructions from the mine officials. The place had been visited by the mine foreman at 11:30 a. m. and the accident occurred at 2:30 p. m.

March 7—GEORGE WEST, English, electrician, experience 43 years, age 58 years, married, no children, employed by the Colorado Fuel & Iron Co., at the Morley mine, Las Animas county, was injured Nov. 14th, 1929, by a fall off of a building and died on the above date. Deceased was raising electric wires on the Y. M. C. A. building, the ladder on which he stood slipped and he fell about 9 ft. to the ground. He had his leg and hip fractured which resulted in his death.

March 10—THOMAS OBEROSLER, American, pick miner, experience 2 years, age 40 years, married, five children, employed by the Colorado Fuel & Iron Co., at the Morley mine, Las Animas county, was injured March 4th by a fall of top coal and rock and died on the above date. Deceased and his partner were working at the face of a room pillar. The assistant mine foreman had instructed them to put up a prop on the curve of the pillar where the roof was bad, showing a slip paralleling the working place. There was only one prop in the place and the mine foreman left to get some more props which he sent with the next trip of cars. However, instead of setting a prop as instructed, deceased started to load a car with coal from the rib, when nearly through the top coal gave way from the roof striking him. There was sufficient clearance to set the prop and this should have been done to protect the roof before loading coal. Both deceased and mine foreman are responsible for the accident. Deceased for not setting prop and the latter for leaving the place before it was made safe.

March 18—DOMENICK DI PAOLO, Italian, driver, experience 23 years, age 44 years, married, two children, employed by the Colorado Fuel & Iron Co., at the Toller mine, Las Animas

county, came to his death by being run over by a loaded pit car. A trip of 12 loaded cars was left over on the parting from the previous day which was the regular rope trip. Two drivers are employed at this parting for the haulage of coal. One, at the time of accident, made a trip with two empty cars to two pillar places and returned with them loaded to the parting, running them to the drag which was on the rear end of the regular rope trip they became fastened by a draw-bar bolt into the hole of the drag. The rope rider started out with his trip but was not aware of the two cars on the drag. He traveled some distance until he reached a grade when the two cars broke loose from the drag and ran back through the parting, a distance of 181 ft., or 36 ft. beyond the parting switch where deceased was caught by the cars and run over and caused his death a few hours later. It is not known why deceased left the parting, whether he tried to stop the cars or attempted to run to a place of safety. The accident was unforeseen and is classed as unavoidable.

March 27—JOHN MODY, Pole, machine miner, experience 10 years, age 48 years, married, two children, employed by the Temple Fuel Co., at the Brodhead No. 9 mine, Las Animas county, was killed by a fall of rock. Deceased was working in a machine room that had just been cut. He was shoveling coal from the side of the room and had removed sufficient coal to expose a length of unsupported roof, measuring 7x9 ft., when a slab of draw slate fell on him killing him. The timbering agreement at this mine is three feet between props. The fire boss, an hour before the accident, examined the place and put a chalk mark on the roof for a prop. Deceased neglected to set this prop. The place was well timbered and according to agreement with the exception of where deceased was working. The accident could have been avoided had deceased been more careful and timbered his place as instructed.

April 7—PETE ARGADY, Hungarian, pick miner, experience 25 years, age 51 years, single, employed by the Moffat Coal Co. at the Oak Hills No. 2 mine, Routt county, came to his death by being struck by a runaway car. Deceased was loading a car on a day when the mine was not working and handled or switched his own cars, which is a custom the management allows some of its employes. On the day of the accident, deceased was working on the old south entry, the grade being about one per cent. He was far enough in to clear one car off the switch and one man can push a car anywhere on the entry. He pulled a loaded car out of his place and let it stand about 120 feet away from him. He took in another car but failed to close the switch for the straight track. He had nearly loaded his second car when the motor came to take the loads out. They bumped into the loaded cars to couple them on the entry. The brake on the car deceased had placed on the entry did not hold and it ran down through the open switch which deceased had not closed. It caught him between the car and face and crushed him to death. If the brake on the car had been

inspected before taking it into the mine, the accident might have been avoided. The responsibility for this death rests with the company.

April 15—JOHN LANER, Austrian, machine miner, experience 20 years, age 58 years, widower, one child, employed by the Bear Canon Coal Co., the Bear Canon No. 6 mine, Las Animas county, was killed by a fall of coal. Deceased was cutting the coal on the left side of his working place to relieve the coal in the center of the machine cut. He had sheared it about two feet when the coal gave way from a half circular slip in the roof about the center of the machine cut, it dislodged a roadhead prop and fell on him, injuring him so severely that he died three hours later. The place had been visited by the mine foreman two and one-half hours prior to the accident and it was well timbered. The accident is classed as unforeseen.

April 28—DAVID A. URQUHART, American, mine foreman, experience 32 years, age 48 years, married, two children, employed by the Newlan Creek Coal Co., at the New Creek mine, Fremont county, was killed by a fall of roof. A miner had reported to him that there was a bad piece of roof at the face of main slope and extending about 10 feet along the longwall face. He tested it and found it heavy and was in the act of building a crib under it, when a slab of rock gave way, displacing three props and fell on deceased, killing him instantly. The accident was unavoidable as the place was well timbered.

May 5—WALTER DLUGOPOLSKI, Pole, rope-rider, experience 12 years, age 28 years, married, two children, employed by the Colorado Fuel & Iron Co., at the Pictou mine, Huerfano county, was killed by a trip of empty cars running over him. Deceased was making first trip in the morning and was riding between the rope car and second car as the trip was being hoisted in. The rope car struck a prop on the lower rib and was derailed throwing deceased between first and second car. Three cars passed over him before the trip was brought to a stop. He was injured so severely that he died 45 minutes later. At the point where the trip was derailed, the clearance between the lower rib props and the cars was insufficient, causing the cars passing to rub against one of these props, consequently the accident is due to the negligence of the company in not maintaining proper clearance on the haulageways.

May 9—WILLIAM R. WESTWOOD, American, pick miner, experience 12 years, age 32 years, married, two children, employed by the Pinnacle-Kemmerer Fuel Co., at the P. K. No. 1 mine, Routt county, came to his death by electrocution. Deceased had just finished drilling three holes with an electric drill and as he was taking it away, he came in contact with the car which was standing about 50 feet from the face of the room. Evidently he touched the iron part of the car which caused a complete circuit

and enveloped him, and from this shock he died. It is possible, that had the voltage been less on the machine, his life might have been saved. All efforts to restore him failed. The accident was a mishap but in order to avoid any further accidents of this nature, the department recommended:

“That the voltage used for drilling be reduced to the minimum.”

May 19—MOSE NELSON, American, driver, experience 20 years, age 35 years, married, two children, employed by the Calumet Fuel Co., at the Calumet No. 2 mine, Huerfano county, was crushed to death between car and rib. Deceased was pulling two loaded cars when his clothing or belt caught on the first car dragging him between the car and rib on the curve at the intersection of the room neck and entry. The accident was unforeseen and is classed as unavoidable.

May 5—JOE VELASQUEZ, Mexican, pick miner, experience one year, age 19, married, no children, employed by the Davich Coal Co., at the Davich mine, Las Animas county, was injured February 2nd, 1930, by a fall of rock and died on the above date. Deceased was working single in a room when a rock fell on him and broke his back. Only one other man was working in the mine and it was two hours before the injured man was brought to the surface. The accident was probably due to the lack of competent supervision by the mine owner or operator as deceased had very little experience in protecting himself.

June 4—MARSIAL FUENTZ, Mexican, loader, experience seven years, age 25 years, single, employed by the Hayden Coal Co., at the Hayden No. 3 mine, Routt county, was killed by a run-away pit car. Deceased and his brother were drilling holes in the face of the dip, 45 feet below neck of room No. 5. One cut had been taken out of this room neck but not enough to lay a switch, therefore a car had to be set on safety blocks and loaded on the main line. There were several other cars set on safety blocks some distance apart on a pitch of about 10%. The rope rider came down to pick up the loads and in some manner a car on the pitch went over the blocks striking the cars at the face of the dip and pinned deceased between the car and face, killing him instantly. Had deceased stayed where he was drilling, he would have escaped being struck, but hearing the bumping of the cars, he feared danger and jumped directly in front of the car. The accident was due to the hazard of mining as apparently the proper signals for gathering the cars were given and obeyed.

August 13—ORESTO CATTANI, Italian, weigh-boss, experience 8 years, age 28 years, married, three children, employed by the Vickers Coal Co., at the Kenneth mine, Las Animas county, was caught between a hoisting rope and sheave wheel causing his death. Deceased was using a tie to put on a loaded pit car which had jumped the track on the tippie. The tie slipped striking his

foot causing him to jump back and he fell 31½ feet to the empty track and his arm was caught in rope pulling it into sheave wheel severing it at the shoulder. He died about eight hours later. The accident was unforeseen and is classed as unavoidable.

August 16—GEORGE KIMMICK, Italian, machine runner, experience 22 years, age 34 years, single, employed by the Canon-Reliance Coal Co., at the Canon mine, Fremont county, was injured by a fall of rock on the 14th and died on the above date. Two timbermen were setting cross bars on a slant between entries. They called Kimmick to see if the timbers they had set would clear the machine and while looking at the timbering a slab of rock broke off at the edge of the cross bars striking deceased and causing such severe injuries that he died two days later. The mine foreman had visited the place at 8:00 a. m. and the accident occurred at 2:00 p. m. It was unforeseen and is classed as unavoidable.

August 17—VIRAN T. CASSIDY, American, electrician, experience 3 years, age 32 years, single, employed by the Hayden Coal Co., at the Hayden No. 3 mine, Routt county, was killed by coming in contact with a high tension wire. He was in charge of installing a new plant and was at work with two helpers putting up a switchboard when in some manner he came too close to the concrete wall where there is a voltage of 23,000 v. and received a shock which killed him instantly. The accident might have been avoided had deceased gone to the transformer room which is on top and turned off the switch before going to work. The accident is a misadventure for which no one can be held responsible.

October 1—ALBERT HAUGH, American, pumper, experience 17 years, age 59 years, widower, three children, employed by the Empire Coal Mining Co., at the Empire mine, Las Animas county, was struck by an empty rope trip and died three hours later from injuries sustained. Deceased stepped out of a cross entry in front of an empty trip coming down the slope. The rope rider saw him and jumped off the trip to bell the engineer to stop but before the trip was halted, it had struck deceased, knocking him to one side and derailing the trip. Deceased said that he tried to get out of the way of the trip but his foot slipped on the rail and he could not get away in time. The place where the accident occurred had a six foot clearance on each side. Had deceased looked up the slope before he stepped out he would have seen the trip coming and the accident would have been avoided.

October 2—SALVADOR A. CRUZ, Mexican, machine miner, experience 25 years, age 44 years, married, two children, employed by the National Fuel Co., at the Puritan mine, Weld county, was killed by a fall of coal and rock. Deceased and partners were extracting pillars on a midnight shift. About 2:30 a. m. the fire boss examined the place and found the top coal a little drummy and ordered extra props. Later on deceased and partners noticed the place taking on a little weight and set several more props, when

suddenly a bump occurred and a portion of rock and top coal gave way from some well defined slips which formed a pot. The place was apparently well timbered and the men were practical miners. The accident was due to the rock strata taking a sudden slip at the line of face and while not visible, practically cut out the top of coal at that point. No one is held responsible for the accident.

October 2—FRED GIULIANO, Italian, timberman, experience 27 years, age 49 years, married, three children, employed by the Victor-American Fuel Co., at the Delagua mine, Las Animas county, was killed by a fall of rock. Deceased was in the act of putting up a cross bar on the haulage road from the chain pillar about 50 feet from the working face when a large pot rock fell on him killing him instantly. The rock dropped out from between the roadside props right over the track. The place was well timbered and was visited by the mine foreman at 11:30 a. m., and the accident occurred an hour later. The accident is classed as unavoidable.

October 18—HORACE STOKES WISEMAN, American, machine miner, experience 18 years, age 46 years, married, two children, employed by the Clayton Coal Co., at the Clayton mine, Weld county, was killed by being caught between loaded car and rib. Deceased and partners were cutting and loading their own coal in a pair of diagonal entries turned off the second northeast, upper seam, to connect with the new Morrison mine. Deceased was handling the last car for the day to the parting. The grade was about 3% against the loaded car. Deceased was walking in front of the car behind the mule carrying an empty keg. There were no eye witnesses as to what took place but from examination of the place and statements made by one of the partners who was close behind with an electric machine and saw him just as he was caught, that evidently he had slipped in some manner with his head going into the rib and owing to the tail chain being only about 4 feet long, the loaded car struck him at the same time forcing him into a position that caused his neck to break resulting in instant death. The accident is a misadventure for which no one could be held responsible.

October 29—WILLIAM HORHAN, American, driller, experience 14 years, age 29 years, married, two children, employed by the Barbour Coal Co., at the Alamo No. 2 mine, Huerfano county, was killed by a fall of rock and top coal. Deceased was running an electric drill for Cardox shooting. He was busy in a room No. 2 off 2nd dip when a runaway trip of empty cars came down the dip knocking out cross bars enroute. Deceased came out of the room to see if anyone had been caught by the trip and when he reached the point between rooms No. 3 and No. 4 where two cross bars had been knocked out, about two tons of top coal and rock fell on him killing him instantly. The second left entry has 1½% in favor of the loaded trips. A ten-car trip is operated on the second

left entry between main slope and second dip. The hoist on the second dip is not set back far enough to accommodate a ten-car trip without detaching rope from the front car and reattaching it to some other car further back on the trip. While this was being done, the trip in some manner started down second dip. On this particular trip a truck was attached, which no doubt made switching more difficult. The man in charge of the trip was not the regular rope rider. The company and rope rider are held equally responsible for the accident.

November 6—MATT STAVANO, Austrian, pick miner, experience 25 years, age 50 years, married, seven children, employed by the Huerfano Coal Co., at the Ludlow mine, Las Animas county, was killed by a fall of rock. Deceased was brushing the bottom at the face of his working place when a slab of draw slate fell from between the last cross bar and safety prop at the face. The distance between cross bar and safety prop at the face was three feet and the place was well timbered. The fire boss visited the place at 5:30 a. m. and the accident occurred at 8:00 a. m. No one is held responsible for the accident as it was unforeseen and is classed as unavoidable.

November 8—MILBURN MAY, American, trapper, experience five months, age 16 years, employed by the Victor-American Fuel Co., at the Chandler mine, Fremont county, was injured on Oct. 31st, by being dragged by a trip and died on the above date. Deceased was trapping and opened the door to let a trip pass through and in some manner his right foot was caught in the trip and he was dragged 120 feet. No one could explain how he was caught for there is sufficient space around the door and a shelter hole for the trapper to stay when a trip is passing, also there is a rope attached to the door so that it can be opened from the shelter hole. Apparently the accident was a misadventure for which no one can be held responsible.

November 8—JAMES CAIRNEY, American, loader, experience 22 years, age 39 years, married, no children, employed by the Alamo Coal Co., at the Alamo mine, Huerfano county, was killed by a fall of rib coal. Deceased was employed in the first raise panel of the third left entry and was driving a raise slant to connect the first and second panels. The pitch of the slant is 50%. The mine foreman visited the place about 8:00 a. m. and the accident occurred at 12:15 p. m. The mine foreman instructed deceased and his partner to widen the slant by taking coal off the lower rib with a pick if possible, if not, to drill a hole so it could be shot off. A hole was drilled and deceased was working about 20 feet back from the face of slant shoveling coal into the chute when an invisible slip in the coal of the lower rib gave way allowing a chunk of coal, weighing about 15 tons, to slide down, catching deceased and causing such injuries that he died several hours later. The accident was unforeseen and is classed as unavoidable.

November 12—J. W. SHEFFIELD, American, timberman, experience 33 years, age 47 years, married, one child, employed by the National Fuel Co., at the Puritan mine, Weld county, was killed by a fall of top coal and rock. The place was visited by the mine foreman at 2:40 p. m. and accident occurred at 3:00 p. m. Deceased and his partner were working in room No. 12 off the eleventh west off sixth south where they were to bring about a cave in the space which was made after extracting the coal from a lift taken through the room pillar. In order to facilitate the work they were weakening several of the props by chopping notches in them. When deceased was at the last prop set under the outby cross bar and started to notch it, the place suddenly began caving owing to a large unseen slab of rock above the top coal directly over the cross bar which was thrown out and caught deceased before he could get away and crushed him to death. Deceased was considered a very good workman and experience in making these caves in pillar sections. The accident was unforeseen and is classed as unavoidable, although it is likely that it might not have happened had the timbermen shot out, rather than chopping out of the props. Management has agreed to try in the future to shoot out the timbers whenever a cave is to be made.

November 29—JOSEPH VARRA, JR., American, label paster, age 17 years, employed by the National Fuel Co., at the Monarch No. 2 mine, in the railroad yard, Boulder county, was caught between two railroad cars and crushed to death. Deceased was leaning against the end of an empty railroad car, 155 feet west of the tipple at the intersection of the nut and slack tracks, when a box car, probably a few feet away, was pulled up and caught him, killing him instantly. A stationary steam hoist located north of the tracks handles cars at the different chutes. The car dropper had dropped three empty coal cars to place them on the slack coal and nut coal tracks. When the cars got to the intersection of the two tracks, he saw that the cars would not pass the box car on the nut track so he held them up to get proper clearance and he decided to drop box car down a short distance to get the needed clearance for these cars to pass. To do this car is pulled up and then allowed to drop back of its own weight. When box car was pulled up it caught deceased between end of open car and end of box car. It was a misadventure, although if proper precaution had been taken to see that everything was in the clear before the cars were moved, the accident might have been avoided.

December 2—ARTE PENNY, American, machine miner, experience 30 years, age 48 years, married, five children, employed by the National Fuel Co., at the Puritan mine, Weld county, was injured by a fall of face coal on the 1st of December and died on the following day. Deceased was working at the face of his room taking down loose coal when a chunk of it fell on his right foot discoloring nail on big toe but not breaking the skin. Place was in good condition and well timbered. After the accident deceased

complained of being stuffy and pains in his chest. But he and his son, who was working with him, finished the shift and on his way out his pains became very severe and a motor picked him up and took him to the bottom of the shaft and then he was brought to the mine office where a doctor treated him and was sent to the St. Vrain hospital at Longmont where he died 35 hours later. The accident occurred at 11:30 a. m. and the mine foreman visited the place about 2:00 p. m. and they said nothing to him about it. Also, the mine foreman had visited the place a few minutes before the accident. Apparently the injury seemed minor to them but it terminated in death. The doctors claim that the shock of the bruised toe caused embolism or a clot on the heart which proved fatal to him. The accident was unforeseen and is therefore classed as unavoidable.

December 27—JOSEPH MICKLICH, Austrian, pick miner, experience not stated, age 44 years, married, no children, employed by the South Canon Mine Leasing Co., was injured December 2nd by falling against the edge of a wooden slab used as a step on the pitch of the coal. He struck his abdomen but continued to work and finished the shift. However, a few days later his condition became serious as he had ruptured his abdomen and an abscess formed which necessitated an operation and he died shortly after. The accident occurred while deceased was performing his duty and the cause was unforeseen and is classed as unavoidable.

In 1930 five deaths occurred in coal mines that are not charged to the industry, as they were due to natural causes, to-wit:

January 1st—John Wolny, heart failure, Liley Mine.

April 18th—William Moss, heart failure, McNeil Mine.

September 2nd—Green Nelson, heart failure, Harris Mine.

October 10th—Chas. S. Humphrey, heart failure, Boulder Valley.

December 12th—Adolph Vallegos, heart failure, Vallegos.

LIST OF SUCCESSFUL CANDIDATES WHO PASSED THE EXAMINATION FOR COAL MINE OFFICIALS, JULY 9TH, 10TH AND 11TH, 1930.

FIRST CLASS MINE FOREMAN

Certificate Number	Name	Address
110-30	Arnold, G. O.	Oak Creek, Colo.
44-30	Andrew, Frank	Routt, Colo.
47-30	Banecks, K. N.	Rugby, Colo.
129-30	Beebe, John	Segundo, Colo.
92-30	Bickerton, Fred S.	Colorado Springs, Colo.
54-30	Bowen, Wm.	Mt. Harris, Colo.
126-30	Boyle, Robert	Denver, Colo.
24-30	Busheff, Nick M.	Denver, Colo.
39-30	Campbell, Andrew	Tioga, Colo.
20-30	Currie, Henry R.	Walsenburg, Colo.
132-30	Fennell, Wesley	Colorado Springs, Colo.
68-30	Ferguson, Wm.	Frederick, Colo.
35-30	Garcia, Rudolf	Cokedale, Colo.
9-30	Gardiner, Peter	Baldwin, Colo.
28-30	Godfrey, Malvern J.	Crested Butte, Colo.
2-30	Harris, Lisle N.	Louisville, Colo.
112-30	Haynes, Alfred	Oak Creek, Colo.
114-30	Haynes, Arthur	Oak Creek, Colo.
123-30	Hurst, Clyde	Mt. Harris, Colo.
62-30	Irwin, Edward	Alamo, Colo.
130-30	Kilpatrick, James C.	Alamo, Colo.
70-30	Lemberg, Joseph	Lafayette, Colo.
41-30	Llewellyn, Rees	Silt, Colo.
103-30	McIntyre, W. D.	Oak Creek, Colo.
4-30	Madsen, Matt	Oak Creek, Colo.
63-30	Martinez, Fred	Alamo, Colo.
82-30	Miick, Rudolph F.	Oak Creek, Colo.
106-30	Mishork, Walter	Routt, Colo.
170-30	Moore, R. W., Jr.	Coalmont, Colo.
128-30	Neish, W. H.	MacGregor, Colo.
42-30	Palmetto, Dominic	Grand Junction, Colo.
55-30	Park, Daniel	Dacono, Colo.
33-30	Pasic, John L.	Crested Butte, Colo.
115-30	Roberts, James	Denver, Colo.
26-30	Smith, Willie H.	Morley, Colo.
29-30	Vidmar, Chas.	Mt. Harris, Colo.
124-30	Wakely, Thomas	Denver, Colo.
171-30	Whiteside, F. W.	Denver, Colo.
169-30	Williams, Harold T.	Grand Junction, Colo.
23-30	Williams, Myron D.	Grand Junction, Colo.
127-30	Winner, Clyde	Delagua, Colo.
12-30	Wirth, Vernon J.	Ludlow, Colo.

FIRST CLASS ASSISTANT MINE FOREMAN

1-30	Thomas, John W.	Louisville, Colo.
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FIRE BOSS

89-30	Almond, John D.	Cokedale, Colo.
90-30	Ausec, Frank	Colorado Springs, Colo.
104-30	Bacco, Albert	Oak Creek, Colo.
108-30	Balek, Frank	Frederick, Colo.
120-30	Barton, Thomas Emmett	Colorado Springs, Colo.
18-30	Battiste, L. E.	Delcarbon, Colo.
84-30	Beebe, Arthur Roy	Segundo, Colo.
85-30	Bennett, John H.	Grand Junction, Colo.
27-30	Benton, R. J.	Mt. Harris, Colo.
76-30	Bon, Joseph	Brodhead, Colo.
118-30	Brinker, Elmer	Coalmont, Colo.
105-30	Bruder, Louis	Pinnacle, Colo.
117-30	Chedsey, John C.	Coalmont, Colo.
83-30	Clipp, Roy T.	Cedaredge, Colo.
111-30	Collister, F. C.	Delagua, Colo.
66-30	Connors, Stewart D.	Aguilar, Colo.
77-30	Conway, Leroy Chas.	Mt. Harris, Colo.
64-30	Costa, Christopher L.	Colorado Springs, Colo.
74-30	Costa, Kelly	Brodhead, Colo.
56-30	Cullar, James T.	Mt. Harris, Colo.

Certificate

Number	Name	Address
36-30	Covert, Joe.....	Mt. Harris, Colo.
75-30	Dale, G. R.....	Delagua, Colo.
34-30	Dalrymple, Robert F.....	Denver, Colo.
32-30	Despod, Steve.....	Mt. Harris, Colo.
6-30	Dirkes, Robert.....	Louisville, Colo.
122-30	Eadie, George.....	Delcarbon, Colo.
36-30	Elliott, Robert.....	Colorado Springs, Colo.
14-30	Farris, James A.....	Morley, Colo.
22-30	Friel, Mike.....	Delcarbon, Colo.
69-30	Galasini, Domnick.....	Pictou, Colo.
98-30	Garrett, Charles R.....	Boncarbo, Colo.
58-30	Gasper, Lewis.....	Lafayette, Colo.
101-30	Gibboney, E. W.....	Oak Creek, Colo.
48-30	Gieser, W. J.....	Rugby, Colo.
71-30	Gilmour, James.....	Louisville, Colo.
73-30	Graham, James W., Jr.....	Lafayette, Colo.
78-30	Harmon, John W.....	Mt. Harris, Colo.
91-30	Harris, Frank W.....	Erie, Colo.
53-30	Harris, Sam.....	Brodhead, Colo.
45-30	Harrison, Mark.....	Oak Creek, Colo.
25-30	Hill, Ed.....	Paonia, Colo.
10-30	Housh, Robert R.....	Matheson, Colo.
109-30	Jairrell, Faulkner F.....	Berwind, Colo.
43-30	Johnson, Robert.....	Lafayette, Colo.
30-30	Johnson, Robert L.....	Crested Butte, Colo.
52-30	Larkin, Arthur V.....	Placita, Colo.
88-30	Lee, Raymond.....	Colorado Springs, Colo.
59-30	Levi, Julius.....	Alamo, Colo.
3-30	Lewis, Chas. E.....	Walsenburg, Colo.
97-30	Lewis, William J.....	Routt, Colo.
40-30	Lynch, Theo.....	Colorado Springs, Colo.
46-30	McCallum, C. M.....	Mt. Harris, Colo.
65-30	McIlwee, Wm. F.....	Agullar, Colo.
119-30	Manka, John.....	Trinidad, Colo.
94-30	Marsh, Walter Jr.....	Cokedale, Colo.
131-30	Mathews, John.....	Oak Creek, Colo.
99-30	Mathews, Joseph, Sr.....	Oak Creek, Colo.
102-30	Mathews, Joseph Jr.....	Oak Creek, Colo.
19-30	Mitchell, Roy.....	Delcarbon, Colo.
67-30	Montero, John B.....	Delagua, Colo.
96-30	Morgan, Ted.....	Superior, Colo.
7-30	Munn, James J.....	Canon City, Colo.
121-30	Neish, George F.....	Denver, Colo.
15-30	Neish, Wm. K.....	MacGregor, Colo.
81-30	Odendahl, Walter B.....	Oak Creek, Colo.
8-30	Partch, Joseph E.....	Baldwin, Colo.
116-30	Pennington, Newell A.....	Coalmont, Colo.
5-30	Phelp, David C.....	Frederick, Colo.
80-30	Pickens, Andrew.....	Alamo, Colo.
79-30	Price, David.....	Alamo, Colo.
95-30	Roberts, Wm.....	Superior, Colo.
100-30	Rossi, Thomas.....	Oak Creek, Colo.
49-30	Scavarda, Mike.....	Canon City, Colo.
38-30	Schlessinger, Wm. E.....	Mt. Harris, Colo.
72-30	Schwelka, Carlo.....	Brodhead, Colo.
11-30	Siner, Ambrose C. S.....	Placita, Colo.
31-30	Skinner, Walter.....	Bear River, Colo.
37-30	Skufca, Tony.....	Mt. Harris, Colo.
93-30	Slate, M. J.....	Colorado Springs, Colo.
87-30	Smith, Fred E.....	Frederick, Colo.
51-30	Smith, John F.....	Brodhead, Colo.
50-30	Stephan, L. G.....	Lafayette, Colo.
61-30	Stewart, J. R.....	Brodhead, Colo.
57-30	Telck, Joe.....	Brodhead, Colo.
16-30	Todd, George.....	MacGregor, Colo.
125-30	Tuck, J. T.....	Alamo, Colo.
113-30	Twibey, George Edwin.....	Routt, Colo.
60-30	Walsh, Aron.....	Mt. Harris, Colo.
107-30	Watts, Roy.....	Oak Creek, Colo.
13-30	West, Wm.....	Morley, Colo.
21-30	Williamson, Henry.....	Delcarbon, Colo.
17-30	Winters, Howard.....	Oak Creek, Colo.

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