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TENTH ANNUAL REPORT
OF THE
STATE INSPECTOR OF
COAL MINES
COLORADO
1922

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TABLE NO. 1

Name of Company	Name of Mine	County	Name of Manager or General Superintendent	Post Office	Name of Superintendent	Mine Post Office Address	Railroad to Mine	Geological Name of Number of Feet Worked	Average Thickness
									Feet
Hitchell & Sons	Parkdale	Adams	Wm. Elchell	Lafayette	F. Elchell	Lafayette	None	Laramie Formation	3
Nosaman & Fowler	Pazona	Archuleta	Nosaman & Fowler	Pazona Springs	W. J. Nosaman	Pazona Springs	None	Laramie Formation	3
Rocky Mountain Fuel Co.	Industrial	Boulder	Geo. T. Pearl	Denver	Thos. G. Libby	Superior	C. & S.	Industrial	4 1/2 to 10
Rocky Mountain Fuel Co.	Standard	Boulder	Geo. T. Pearl	Denver	Chas. B. Erlingen	Lafayette	C. B. & Q.	Standard	4 to 6
Rocky Mountain Fuel Co.	Vulcan	Boulder	Geo. T. Pearl	Denver	Chas. B. Erlingen	Lafayette	C. B. & Q.	Vulcan	5 to 9
Rocky Mountain Fuel Co.	Acme	Boulder	Geo. T. Pearl	Denver	J. C. W.	Louisville	C. & S.	Louisville Lower	4 to 8
Rocky Mountain Fuel Co.	Simpson	Boulder	Geo. T. Pearl	Denver	Thos. Allan	Lafayette	C. & S., C. B. & Q.	Simpson	6 to 14
Rocky Mountain Fuel Co.	Monarch No. 2	Boulder	Geo. T. Pearl	Denver	John T. Sulte	Hroomfield	C. & S.	Laramie Cretaceous	6 to 7
Rocky Mountain Fuel Co.	Centennial	Boulder	Geo. T. Pearl	Denver	Wm. Andrews	Louisville	C. & S.	Laramie Formation	5 to 6
Fox Coal Mining Co.	Fox	Boulder	R. A. Pierce	Denver	Harry Rusher	Gorham	C. & S.	Gorham	6 to 8
Crown Fuel Co.	Crown	Boulder	Geo. Fruth	Denver	John E. Libby	Louisville	C. & S.	Louisville	4 to 6
Rundland Coal Co.	Rundland	Boulder	Helen A. Golden	Louisville	Geo. Williams	Boulder	None	Louisville	7
Black Diamond Coal Co.	Black Diamond	Boulder	James Wardle	Louisville	James Wardle	Louisville	C. & S.	Louisville	5 to 6
Nonpareil Coal Corporation	Nonpareil	Boulder	Chas. Lilley	Louisville	Chas. Lilley	Louisville	C. & S.	Louisville	4 to 6
Cracker Jack Coal Co.	Cracker Jack	Boulder	W. W. Morgan	Denver	W. W. Morgan	Gorham	C. & S.	Laramie Formation	7 to 8
MacFarlane Coal Co.	MacFarlane	Boulder	Herbert Knapp	Boulder	F. J. MacFarlane	Gorham	C. & S.	Laramie Formation	6 to 8
Hoss & Lorenzo	Gorham No. 2	Boulder	Frank Ross	Boulder	Frank Ross	Gorham	None	Laramie Formation	4 to 6
Davies Coal Co.	Davies	Boulder	T. L. Davies	Gorham	T. L. Davies	Gorham	None	Laramie Formation	5 to 6
Cactus Coal Co.	Cactus	Boulder	James Gilardo	Gorham	James Gilardo	Gorham	None	Laramie Formation	5 to 6
Independent Coal Co.	Independent	Boulder	J. H. Harty	Boulder	J. H. Harty	Boulder	None	Laramie Formation	5 to 6
Blue Goose Coal & Coke Co.	Blue Goose	Boulder	J. D. Sloan	Boulder	J. D. Sloan	Boulder	None	Laramie Formation	7 to 8
Junita Coal & Coke Co.	Junita	Delta	John C. Bowle	Bowle	Alex R. Bowle	Bowle	D. & R. G. W.	Laramie Formation	11
Paonia Coal Co.	Paonia	Delta	S. J. Henn	Paonia	Ed. B. Cox	Paonia	None	Laramie Formation	8 to 6
McDowell Coal Co.	McDowell	Delta	John McDowell	Hotchkiss	John McDowell	Hotchkiss	None	Laramie Formation	20 to 4
North Fork Coal Co.	North Fork	Delta	C. O. Earnest	Hotchkiss	W. B. Hutchinson	Paonia	None	Laramie Formation	4 to 6
Frank Converse	Converse	Delta	L. L. Converse	Paonia	L. L. Converse	Paonia	None	Laramie Formation	4 to 6
A. W. Hall & Son	Red Mountain	Delta	A. W. Hall	Cedaredge	A. W. Hall	Cedaredge	None	Laramie Formation	3 to 5
Green Valley Coal Co.	Green Valley	Delta	R. J. Campbell	Cedaredge	R. J. Campbell	Cedaredge	None	Laramie Formation	4 to 5
Frank M. Fickes	Coalby Red Canon	Delta	Frank M. Fickes	Cedaredge	Frank M. Fickes	Cedaredge	None	Laramie Formation	3 to 4
Stiles Coal Co.	Stiles	Delta	John Stillwagon	Cedaredge	John Stillwagon	Cedaredge	None	Laramie Formation	14 to 2
Wintona Coal Co.	Wintona	Delta	I. L. Carter	Cedaredge	I. L. Carter	Cedaredge	None	Laramie Formation	14 to 18
Wintona Coal Co.	Wintona	Delta	J. C. Bowlerman	Cedaredge	J. C. Bowlerman	Cedaredge	None	Laramie Formation	14 to 18
Wintona Coal Co.	Wintona	Delta	Harry McMillins	Cedaredge	Harry McMillins	Cedaredge	None	Laramie Formation	10 to 10
Wintona Coal Co.	Wintona	Delta	Harry McMillins	Cedaredge	Harry McMillins	Cedaredge	None	Laramie Formation	10 to 10
Wintona Coal Co.	Wintona	Delta	Mike Mangan	Hotchkiss	Mike Mangan	Hotchkiss	None	Laramie Formation	10 to 10
Wintona Coal Co.	Wintona	Delta	W. R. DeGraffenried	Hotchkiss	W. R. DeGraffenried	Hotchkiss	None	Laramie Formation	7 to 7
Roy Bennett	Roy Bennett	Delta	Roy Bennett	Hotchkiss	Roy Bennett	Hotchkiss	None	Laramie Formation	6 to 6
Investors Securities Co.	Investors Securities Co.	Delta	W. L. MacCormac	Matheson	W. L. MacCormac	Matheson	None	Laramie Formation	11 to 11
Wright Barker	Wright Barker	Delta	Wright Barker	Matheson	Wright Barker	Matheson	None	Laramie Formation	7 to 11
Colorado Fuel & Iron Co.	Colorado Fuel & Iron Co.	Delta	Henry Thomas	Colorado Springs	Henry Thomas	Colorado Springs	D. & R. G. W.	Laramie Formation	6 to 6
Colorado Fuel & Iron Co.	Colorado Fuel & Iron Co.	Delta	John Stroen	Colorado Springs	John Stroen	Colorado Springs	R. I.	Laramie Formation	14 to 20
W. D. Corley	W. D. Corley	Delta	W. D. Corley	Colorado Springs	W. D. Corley	Colorado Springs	None	Laramie Formation	10 to 10
Danville Coal Co.	Danville	Delta	Thomas F. Elliott	Colorado Springs	Thomas F. Elliott	Colorado Springs	None	Laramie Formation	10 to 10
Altitude Coal Co.	Altitude	Delta	Edwin Howells	Colorado Springs	Edwin Howells	Colorado Springs	None	Laramie Formation	4 to 6
Coltonwood Coal Co.	Coltonwood	Delta	Fred Savelle	Colorado Springs	Fred Savelle	Colorado Springs	None	Laramie Formation	4 to 4</

TABLE No. 2

POWER EQUIPMENT OF COAL MINES IN THE STATE OF COLORADO FOR YEAR ENDED DECEMBER 31, 1922

[illegible]

Grand Junction Mining & Fuel Co.	Green Valley Coal Co.	No	Pow	er	Equ	lp	ment	1	100	4	150	1	150	4	1
Griffin Coal Co.	Griffin	No	Pow	er	Equ	lp	ment	1	100	4	150	1	150	4	1
Hall, A. W. & Son	Red Mountain	No	Pow	er	Equ	lp	ment	1	100	4	150	1	150	4	1
Hart Coal Co.	Hart	No	Rep	ort											
Hawkeye Coal Co.	McDowell	1	80												
Hayden Bros. Coal Corp.	Hayden	4	900	1	500			2	490	1	50	1	200	1	
Hayden Valley Mutual Coal Co.	Hwy Creek	4	40						350	1	175			2	5
Henderson, P. E.	Peacock	No	Pow	er	Equ	lp	ment							1	
Heeperus Fuel Co.	Heeperus	2	250	2	240			2	160	3	87	1	145	5	1
Hidden Treasure M. Co.	Hiddeu Treasure	No	Rep	ort											
Holland, W. C.	Hiverville	No	Pow	er	Equ	lp	ment								
Huerfano Coal Co.	Ludlow	No	Pow	er	Equ	lp	ment							2	
Hunter, J. H.	Hunter	No	Pow	er	Equ	lp	ment		2	50	1	20	20	1	3
Independent Coal Co.	Independent	2	110												
International Fuel Corp.	Wolf Creek	2	300	5	157					3	50	1	20	1	
International Fuel Corp.	Uvaas	2	350	6	343					2	12	1	12	4	1
Ironore Securities Co.	Security	1	50	14	800	3	620	12	50	1	50	1	50	1	900
Irons, Wm. & Son	Haily	No	Pow	er	Equ	lp	ment							1	2100
Jeffrey Fuel Co.	Jeffrey	No	wer	Pu	rchas	ed									
Jewel Collieries Co.	Jewel	No	wer	Pu	rchas	ed									
Jonger Fuel Co.	Bashoar	No	Pow	er	Equ	lp	ment		1	50			7		
Jones & Trachia	Douglas Creek	No	Pow	er	Equ	lp	ment						1		
Juanita Coal & Coke Co.	Kling	No	Pow	er	Equ	lp	ment		2	750	2		10	2	
Katala Ludwig	Prospect Hill	No	Pow	er	Equ	lp	ment								
Keota Coal M. Co.	Keystone	2	300	1	125			1	114				1		
Keystone Mining Co.	Leone	No	Pow	er	Equ	lp	ment		1	50	2	300	1	300	1
Leone L. H.	Layden No. 3	No	Pow	er	Equ	lp	ment		2	235	14	250	2	250	20
Layden Coal Co.	Layden	No	Pow	er	Equ	lp	ment								
Liberty Coal Co.	Liberty	No	Rep	ort											
Liberty Coal & Merc.	Nearing	No	Rep	ort											
Loebman, Dan C.	Hear Cal	No	Pow	er	Equ	lp	ment								
MacCormac Coal Co.	Red Ash	1	100												
Mancos Mesa Coal Co.	Mancos	No	Pow	er	Equ	lp	ment								
Marshall, J. R.	Marlon	No	Pow	er	Equ	lp	ment								
Marsh, R.	Fishers Peak	No	Pow	er	Equ	lp	ment								
Mattivi & Son	Bunker Hill	No	Pow	er	Equ	lp	ment		1	4					
McDowell Coal Co.	Berry	No	Pow	er	Equ	lp	ment								
McGinley, Wm.	McGinley	No	Rep	ort											
McGovern Coal Co.	Maltot (Shamrock)	No	Rep	ort											
McIntosh & Pritchard	McIntosh	No	Pow	er	Equ	lp	ment								
McIntosh Coal Co.	Hill Springs	No	Pow	er	Equ	lp	ment								
McIntosh & Kennedy	Rove Canyon	No	Pow	er	Equ	lp	ment								
McMillin Coal Co.	Hollins	No	Pow	er	Equ	lp	ment								
McNally & Thompson	Maitland	No	Pow	er	Equ	lp	ment								
McNeill Coal Co.	MacGregor	3	750	3	425			3	150	275	6	611	2	30	11
Meeker Coal & Dev. Co.	Meeker No. 1	No	Pow	er	Equ	lp	ment		1	20					
Mena Coal Co.	Winger	No	Pow	er	Equ	lp	ment								
Midway Coal Co.	Midway	No	Pow	er	Equ	lp	ment								
Midwest Coal Co.	Midwest	No	Pow	er	Equ	lp	ment								
Miners Coal & Coke Co.	Williams	No	Pow	er	Equ	lp	ment								
Minerals, Mike	Kurtzville	No	Pow	er	Equ	lp	ment								
Minnie Coal Co.	Minnie	No	Pow	er	Equ	lp	ment								
Moffat Coal Co.	Oak Hills No. 1	4	1000	1	300	2	450	6	3	350	8	430	1	131	8
Moffat Coal Co.	Oak Hills No. 2	No	wer	fr	om	Oak	Hills	No	1	1	37	1	37	8	1
Mountain View Coal Co.	Walden	1	35												
Mt. Evans Fuel Co.	Mt. Evans	1	35												
Mutual Coal Co.	Mutual	3	450	3	190										
National Fuel Co.	Monarch No. 2	3	100	1	150										
National Fuel Co.	Thor	1	100	2	75										
National Fuel Co.	Puritan	6	600	6	310			1	75	14	200	2	100	18	
Naturilla Stores Co.	Cloverdale	No	Pow	er	Equ	lp	ment								
Nelson Coal Corp.	Nonpareil	3	325	4	225										
North Fork Coal Co.	North Fork	No	Pow	er	Equ	lp	ment								
North Park Coal Co.	Moore No. 1	2	200	4	140			3	300	1	125	4			
North Park Coal Co.	Moore No. 2	2	140	3	150			2	150	1	100	1			
Nossaman & Fowler	Nossaman	1	10												
Oakdale Coal Co.	Oakdale	5	750												
Ohio Creek Coal M. Co.	Ohio Creek	1	100												
Ohkrant Mining Co.	Ohkrant	No	Pow	er	Equ	lp	ment								
O. K. Coal Co.	O. K.	No	Pow	er	Equ	lp	ment								
Palmdale Coal & Supply Co.	Palmdale	No	Pow	er	Equ	lp	ment								
Panna Coal Co.	Panna	No	Pow	er	Equ	lp	ment								
Petry & Son	Jack O'Lantern	No	Pow	er	Equ	lp	ment		1	6	1	3	1	400	1
Pikes Peak Consolidated Fuel Co.	Pikeview	3	300	1	250	3	420								
Pine Fuel Co.	Pine	No	Pow	er	Equ	lp	ment		2						
Pinos Altos Coal Co.	Freeman	No	Pow	er	Equ	lp	ment								
Piuchel Bros.	Earnest	No	Pow	er	Equ	lp	ment								
Postal Coal M. Co.	Postal	1	40												
Prairie Canon Coal Co.	Prairie Canon	No	Pow	er	Equ	lp	ment								
Producers Coal Co.	Phillip No. 1 & 2	3	260	4	200			1	625						
Rankin, Chas. H.	Star (Thomas)	No	Pow	er	Equ	lp	ment								
Rapson Coal Co.	Rapson No. 1	3	260	4	200			1	625						
Rauman Coal Co.	Rauman	No	Pow	er	Equ	lp	ment								
Rasmussen, H. J.	City	No	Pow	er	Equ	lp	ment								
Rene Coal Co.	Black Diamond	No	Pow	er	Equ	lp	ment		1	16					
Rio Blanco Coal Co.	Fairfield	No	Rep	ort											
Rocky Mountain Fuel Co.	Industrial	3	350	6	585			3	250	7	260	2	23	14	
Rocky Mountain Fuel Co.	Standard	1	125	5	490	4	205								
Rocky Mountain Fuel Co.	Vulcan	2	250	3	245			1	35	7	700	4	250	9	
Rocky Mountain Fuel Co.	Acme	4	600	4	600			2	170	10	250	3	250	2	
Rocky Mountain Fuel Co.	Simpson	No	Pow	er	Equ	lp	ment								
Rocky Mountain Fuel Co.	Gorham	3	350	6	585			3	250	7	260	2	23	14	
Rocky Mountain Fuel Co.	Alpine	3	330	5	310			2	150	3	325	1	150	11	
Rocky Mountain Fuel Co.	Porbes	1	100	4	120			1	100	4	120	1	30	34	
Rocky Mountain Fuel Co.	LaBelle	1	150	1	150			1	75						
Rocky Mountain Fuel Co.	Piedmont	1	150	1	150			1	75						
Rocky Mountain Fuel Co.	Southwestern	1	150	1	150			1	75						
Rocky Mountain Fuel Co.	Columbine	No	Pow	er	Equ	lp	ment								
Rocky Mountain Fuel Co.	Grant	1	10					2	100	3	80	1	40	8	
Rocky Mountain Fuel Co.	Frederick	4	400	4	350										
Rosa Coal Co.	Horace	3	325	3	165			1	150	1	50	4	50	13	
Rosa & Lorenzo	Gorham No. 2	No	Pow	er	Equ	lp	ment								
Routt-Pinnacle Coal Co.	Routt-Pinnacle	2	300	1	300			1	200	2	32	1	20	4	
Royal Fuel Co.	Royal	No	Pow	er	Equ	lp	ment		1	24	15	70	1	175	26
Russell, C. O.	Rutley Knife	No	Pow	er	Equ	lp	ment								
Rugby Collieries Co.	Rugby	No	Pow	er	Equ	lp	ment								
Russell, W. E. Coal Co.	Russell	2	375	1	175										
Santa Fe Coal Co.	Santa Fe	No	Pow	er	Equ	lp	ment								
Shamrock Coal Co.	Shamrock	2	150	4	150			1	30	1	20	6			
Smith-Tanner Coal Co.	Smith-Tanner	No	Pow	er	Equ	lp	ment		2	250	2				
Solar Coal Co.	Tulbure	No	Pow	er	Equ	lp	ment								
South Canon Mine Leasing Co.	South Canon	1	80	3	40			1	170						
Stanley Coal Co.	Stanley	No	Pow	er	Equ	lp	ment								
Star Coal Co.	Valley	No	Pow	er	Equ	lp	ment								
States Coal Co.	States	No	Pow	er	Equ	lp	ment								
Siella Mac Coal Co.	Siella Mac	No	Pow	er	Equ	lp	ment								
Stillwagon Bros.	Old Coalby	No	Pow	er	Equ	lp	ment								
Stokes, W. D.	Stokes	No	Pow	er	Equ	lp	ment								
Sunland Coal Co.	Sunland	1	80	2	200	3	49								
Sunshine Coal Co.	Sunshine	No	Pow	er	Equ	lp	ment								
Sunnyside Coal M. Co.	Sunnyside	No	Pow	er	Equ	lp	ment								
Sweet, Fred J.	Caprock	No	Pow	er	Equ	lp	ment		2	175	4	325	1	30	1
Temple Fuel Co.	Broodhead No. 9	1	60					2	115	4	175	3	175	11	
Temple Fuel Co.	Broodhead No. 10	No	Pow	er	Equ	lp	ment								
Thomas Coal Co.	Three Pines	No	Pow	er	Equ	lp	ment								
Three Pines Coal Co.	Indian School	No	Rep	ort											
Toaware Ute Reservation	Triangle	No	Pow	er	Equ	lp	ment								
Trinidad Coal Co.	Baldy Mt.	No	Pow	er	Equ	lp	ment								
Trinidad Coal Co.	Ferrell	No	Pow	er	Equ	lp	ment								
Twin Mesa Coal Co.	Twin Mesa	No	Pow	er	Equ	lp	ment								
Union Coal & Coke Co.	Pryor	No	Pow	er	Equ	lp	ment								
United Collieries Co.	Monroe	3	200	6	260			3	450	7	1620	2	750	25	
Utah Fuel Co.	Somerset														

TABLE No. 3
VENTILATING EQUIPMENT OF COAL MINES IN THE STATE OF COLORADO FOR YEAR ENDED DECEMBER 31, 1922

Name of Operator	Name of Mine	Kind of Opening			Gasous or Non-Gasous	Number and Type of Safety Lamp Used	Method of Ventilation	Name of Fan	Diameter Feet	Revolutions Per Minute	Water Gauge (Inches)	Kind of Power Used	Number of Air Spills	Number of Cubic Feet of Air per Minute Entering the Mine at Inlet	Total Number of Cubic Feet of Air per Minute Entering in All Spills	Number of Persons Employed (Inside)		
		Depth	Slope	Length														
Alax Coal Co.	Capitol	212	1100	12°	Gasous	1	Fan	Buffalo	10	55		Steam		17,500		15,700	43	
Altitude Coal Co.	Altitude				Non-Gasous	1	Natural		10	140	6	Electric		15,650		15,376	38	
American Smelting & Ref. Co.	San Juan			1°	Non-Gasous	1	Fan	Jeffrey	6	252	2	Electric	6	11,905	35,550	57,300	193	
American Smelting & Ref. Co.	Bonanza		600	12°	Non-Gasous	1	Natural										2	
Aspel, James	Fairview	No re	port		Non-Gasous	1	Natural							5,000			1	
Asiel Coal M. Co.	Toltec		2700	10%	Non-Gasous	3	Fan	Sirocco	4 1/2 x 2	220		Electric	2	29,255	29,255	32,100	50	
Baldwin Fuel Co.	Baldwin Star				Non-Gasous	1	Natural							7,200		7,200	7	
Baldwin & Co.	Morning Star				Non-Gasous	1	Natural										1	
Barker, Wright	Wright	Strip	PH		Non-Gasous	1	Natural							3,000	3,000	3,000	3	
Bar Canon Coal Co.	Hesperus No. 2				Non-Gasous	2	Fan (3)	Jeffrey	4	290		Electric	1	13,000	12,200	12,200	117	
Bear River Coal Co.	Bear Canon		1200	12°	Non-Gasous	3	Fan	Atala	12	250	15	Steam	3	22,000	23,000	23,000	41	
Bell Mining Co.	White Ash				Non-Gasous	1	Furnace										2	
Bell, John & Co.	Bureka	100			Non-Gasous	1	Fan	Cole	9	400		Steam		16,800		19,000	20	
Bell, John & Co.	Bonny	No re	port	187	Non-Gasous	1	Natural											
Big Four Coal & Coke Co.	Centennial	366			Gasous	8	Fan	Crawford & McCrimmon	12	120		Steam and Electric	2	11,520	34,000	12,500	90	
Big Johnny Coal Co.	Big Johnny	No re	port		Non-Gasous	3	Fan		10	110		Electric		10,000	16,000	16,000	44	
Black Canon Coal & Fuel Co.	Caddell		1-1000		Non-Gasous	3	Fan							15,000		11,000	11	
Black Diamond Coal Co.	Black Diamond	No re	port		Non-Gasous	1	Fan	Stine	5	270		Electric	1	10,150		10,450	21	
Black Hawk Coal Co.	Black Hills		1800	5°	Non-Gasous	1	Natural							1,000		1,000	3	
Black Hills Coal Co.	Blue Goose	No re	port		Non-Gasous	1	Natural											
Bogalio Coal Co.	Pickford				Non-Gasous	1	Natural							1,000		1,000	3	
Boulder Coal Co.	Book Cliff				Non-Gasous	1	Natural							5,100		5,200	10	
Boulder Black Diamond Coal Co.	Black Diamond		300	20°	Gasous	2	Fan	American	3	300		Steam	2	12,000		10,000	17	
Boulder Valley Coal Co.	Boulder Valley	245			Gasous	2	Fan	Ajax	8	30		Steam and Electric					20	
Bracken & Co.	Harvey Gap				Non-Gasous	1	Natural										2	
Brennan Coal M. Co.	Brennan	1600	5%		Non-Gasous	1	Fan (Ex)	Disc	3x14	65		Electric	2	17,000		17,400	50	
Brewster Independent Coal Co.	Brewster	1000		6°	Non-Gasous	1	Natural	Sturtevant	5	695		Electric		10,390		10,390	9	
Cactus Coal Co.	Cactus	80	15°		Non-Gasous	1	Natural											
Caddell & Son	Hesperus	2000	13°		Gasous	2	Fan		18	66		Electric		21,260			16	
Calumet Fuel Co.	Calumet	2700	10%		Gasous	6	Fan	Jeffrey	4x 8	180	2	Electric	3	40,900		96,600	165	
Calumet Fuel Co.	Perina Peak	5000	5%	20°	Non-Gasous	2	Natural					Electric	2	20,000	20,000	25,000	60	
Canon Co-operative Coal Ass'n	Canon	1084			Non-Gasous	1	Fan	Jeffrey	6	400	2.5	Electric		700		700	2	
Canon-Hellman Coal Co.	Canon				Non-Gasous	1	Fan							28,000		28,000	32	
Canon-Hellman Coal Co.	Hellman	2500	36°		Gasous	2	Fan	Guibal	12x 4	110	1	Electric	1	36,800		44,800	68	
Cedar Hill Coal & Coke Co.	Greenville				Non-Gasous	2	Fan	Guibal	8x10	144		Electric	1	25,700		34,200	25	
Cedar Hill Coal & Coke Co.	Black Diamond	Report	incompl	etc	1°	Non-Gasous	1	Fan	Home-made	5	340		Steam	1	10,300		12,000	19
Champion Coal M. Co.	Champion				Gasous	1	Natural					Gasoline Engine	1	8,000		8,000	7	
Chatfield, R. B.	Chatfield				Non-Gasous	1	Natural										1	
Cherry & Blank	Twenty Mile	400			Non-Gasous	1	Natural										1	
Chew, J. B.	Missouri	360			Non-Gasous	1	Natural										1	
Christensen Coal Co.	Christensen	No re	port	100	10%	Non-Gasous	1	Natural						2,000			12	
Clark, G.	McKee				Non-Gasous	1	Fan	Jeffrey	12	80		Steam	2	36,780		26,780	130	
Clayton Coal Co.	Clayton	325			Non-Gasous	1	Fan	Jeffrey	12	786	1	Electric	10	16,000	10,000	10,000	10	
Colorado Collieries Co.	Sharon	206			Non-Gasous	1	Fan		8	45		Electric		25,000		25,000	20	
Colorado Fuel Co.	Curtis		1300		Non-Gasous	1	Fan											
Colorado Fuel & Iron Co.	Rockvale	327			Gasous	172	397	Fan	C. F. & I.	10	200	3.2	Electric	3	95,000	110,000	94,000	253
Colorado Fuel & Iron Co.	Fremont	402			Gasous	4	200	Fan	Guibal	24	72	1.1	Electric	3	42,260	51,100	49,200	201
Colorado Fuel & Iron Co.	Coal Creek	400			Gasous	24	200	Fan	C. F. & I.	12	150	2.2	Electric	3	57,600	33,666	62,740	166
Colorado Fuel & Iron Co.	Nonac		4000	6°	Non-Gasous	1	Fan	C. F. & I.	10	110	1	Steam	2	22,000		22,000	20	
Colorado Fuel & Iron Co.	Emerald		2500		Gasous	1	Fan	Sturtevant	8	160	.9	Electric	3	32,400		34,000	62	
Colorado Fuel & Iron Co.	Crested Butte			49°	Gasous	5	98	Fan	Capelle	12	120	.5	Steam	2	46,160	22,190	51,680	134
Colorado Fuel & Iron Co.	Elk Mountain		1800		Gasous	2	126	Fan	Jeffrey	6	110	.5	Steam	3	38,000	12,870	48,230	62
Colorado Fuel & Iron Co.	Robinson-Walton R1				Gasous	2	126	Fan	Capelle	8x16	156	2.2	Electric	3	76,180	56,560	64,520	111
Colorado Fuel & Iron Co.	Robinson-Walton R2				Gasous	2	157	Fan	Capelle	9x12	165	.7	Steam	3	138,180		104,860	162
Colorado Fuel & Iron Co.	Robinson-Walton W1				Gasous	1	104	Fan	Not given	9x13	157		Steam	1	36,130		104,860	89
Colorado Fuel & Iron Co.	Canon	170	2°	52°	Gasous	8	375	Fan	Jeffrey	8	375	2.7	Electric	1	60,130	60,130	79,540	144
Colorado Fuel & Iron Co.	Ideal																	

Golden Dawn Coal Co	Golden Dawn	190	30°	Non-Gaseous	1	Natural	Anglewane	13	120	Electric	2	28,410	30,100	4	
Gordon Coal Co	Gordon	3614		Gaseous	2	Fan	Waddle	13	00	Steam and Electric	3	33,500	41,500	120	
Grand Junction M & F Co	Camro			Non-Gaseous	1	Fan	Vulcan	6	140	Electric	3	23,525	16,400	24,000	
Grand Junction M & F Co	Blirling	250		Non-Gaseous	1	Fan							103		
Green Valley Coal Co	Green Valley	500		Non-Gaseous	1	Natural					2	2,500	2,500	2,450	
Grimiths Coal Co	Grimiths	250		Non-Gaseous	1	Natural					3	2,400		2,400	
Halt A W & Son	Red Mountain	350	17°	Non-Gaseous	1	Natural								Idle	
Hart Coal Co	Hart			Non-Gaseous	1	Natural									
Hawkeya Coal Co	McDowell			Non-Gaseous	1	Natural									
Hayden Bros Coal Corp	Hayden	3500	12°	Non-Gaseous	1	Fan	Jeffrey	10x4	30	Steam		35,440	38,710	38	
Hayden Valley Mutual Coal Co	Dry Creek	150	16°	Non-Gaseous	1	Natural						750	750	9	
Henderson, S. D.	Pearock			Non-Gaseous	1	Fan	Unknown	15	65	4	Steam	21,390	23,530	140	
Hesperus Fuel Co	Hesperus	No re	port	Non-Gaseous	1	Fan									
Hidden Treasure M Co	Hidden Treasure	No re	port	Non-Gaseous	1	Fan									
Holland W C	Riverside	Report	Incompl	Non-Gaseous	1	Fan	Crawford & McCrimmon	14	85	5	Steam and Electric	55,000	60,000	06	
Hurland Coal Co	Ludlow			Non-Gaseous	1	Natural									
Hunter, J. B.	Hunter	500	45°	Non-Gaseous	1	Natural									
Independent Coal Co	Independent	200		Non-Gaseous	1	Natural	American	4 1/2	450		Steam	13,000	18,000	20	
International Fuel Corp	Wolf Creek			Non-Gaseous	1	Fan									
International Fuel Corp	Evans	162 1/2		Non-Gaseous	1	Fan	Stine	4 1/2	200		Steam	48,900	49,900	51,330	
Investors Securities Co	Security (White Ash)	342	43°	Non-Gaseous	1	Natural						250	250	18	
Irons, Wm & Son	Baldy	1000		Non-Gaseous	1	Natural									
Jeffries Fuel Co	Jeffries			Non-Gaseous	2	Fan	Stine	6	460		Electric	22,000	27,000	35	
Jewel Collieries Co.	Jewel	2200	15°	Non-Gaseous	3	Fan	Buckeye Disc	6	250						
Jonger Fuel Co	Reahor	Slope		Non-Gaseous	1	Natural						3,000	3,000	3	
Jones & Trachia	Douglas Creek	300		Non-Gaseous	1	Natural	Sirocco	4x16	120		Steam	44,900	54,000	50	
Juanita Coal & Coke Co	King	3500		Non-Gaseous	1	Fan						3,000	3,000	2	
Kahala, Ludwig	Prospect			Non-Gaseous	1	Fan									
Kata Coal M Co	Hill	42		Non-Gaseous	1	Fan	Sirocco	6	310	3	Electric	24,200	34,400	50	
Keystone Mining Co	Keystone	3000		Non-Gaseous	1	Fan	Crawford & McCrimmon	15	70	2 1/2	Steam	45,000	24,210	45,500	
Leone, L.	Leone	1000		Non-Gaseous	1	Natural									
Leyden Coal Co	Leyden No 3	703		Non-Gaseous	1	Fan									
Liberty Coal Co	Liberty	No re	port	Non-Gaseous	1	Fan									
Liberty Coal & Merc Co	Nearling	No re	port	Non-Gaseous	1	Fan									
Lohman, Dan C	Bear Cat	Slope		Non-Gaseous	1	Natural									
MacCorrison Coal Co	Red Ash	No re	port	Non-Gaseous	1	Natural									
Manco Mesa Coal Co	Manco			Non-Gaseous	1	Natural									
Marshall, J. R.	Marion	Not	given	Non-Gaseous	1	Natural									
Marsh, R.	Fishers Peak			Non-Gaseous	1	Natural									
Mattill & Son	Bunker Hill	600	5°	Non-Gaseous	1	Natural						3,000	3,200	15	
McBowell Coal Co	Berry			Non-Gaseous	1	Natural									
McClintock, Wm	McGinley	No re	port	Non-Gaseous	1	Natural									
McGovern Coal Co	Mallot (Shamrock)	No re	port	Non-Gaseous	1	Natural									
McIntosh & Pritchard	McIntosh			Non-Gaseous	1	Natural									
McLenn Coal Co	Bluff Springs	700	10°	Non-Gaseous	1	Natural						6,000	6,500	12	
McLendon & Kennedy	Moys Canyon		3°	Non-Gaseous	1	Natural									
McMillin Coal Co	Rollins	600		Non-Gaseous	1	Natural	Clifford	12	133	1 1/2	Electric	48,000	39,720	39,900	
McNally & Thompson	Malland			Non-Gaseous	2	Fan	Crawford & McCrimmon	15	72		Electric	40,150	23,956	42,500	
McNell Coal Co	MacGregor	2800		Non-Gaseous	2	Fan									
Meeker Coal & Dev Co	Meeker No 1	105		Non-Gaseous	1	Natural						3,000	3,200	4	
Mesa Coal Co	Winger			Non-Gaseous	1	Natural									
Midway Co	Midway	300		Non-Gaseous	1	Natural									
Midwest Coal Co	Midwest	150	10°	Non-Gaseous	1	Natural						17,500	17,500	20,000	
Miners Coal & Coke Co	Williams	100		Non-Gaseous	1	Natural									
Mingan, Mike	Kurtville		2°	Non-Gaseous	1	Natural									
Minnie Coal Co	Minnie	130	21°	Non-Gaseous	1	Natural									
Moffat Coal Co	Oak Hills No. 1	900	10°	Non-Gaseous	1	Fan	Sirocco	6	140	5	Electric	46,200	40,000	48,000	
Moffat Coal Co	Oak Hills No. 2		10°	Non-Gaseous	1	Fan	Jeffrey	10	120	5	Electric	49,000	34,810	43,200	
Mountain View Coal Co	Walden	553	15°	Non-Gaseous	1	Natural									
Mt Evans Fuel Co	Mt Evans	270	15°	Non-Gaseous	1	Natural									
Mutual Coal Co	Mutual	472		Gaseous	23	135	Crawford & McCrimmon	16	86	5	Steam and Electric	50,000	50,000	55,000	
National Fuel Co	Monarch No 2	282	1°	Non-Gaseous	4	Fan	Crawford & McCrimmon	16	90	1	Steam	50,000	50,000	53,000	
National Fuel Co	Thor	1000	4°	Non-Gaseous	1	Fan	Buffalo	16	71	2	Electric	50,000	21,000	33,000	
National Fuel Co	Puritan	110		Non-Gaseous	1	Fan (2)	Jeffrey & Cole	18	176	1.3	Steam and Electric	6	110,000	105,000	114,000
Naturita Stores Co	Cloverdale		3 1/2 in's	Non-Gaseous	1	Natural									
Nemorell Coal Corp	Nemorell	240		Non-Gaseous	1	Fan	Capelle	6	120		Steam	2	19,800	24,000	3
North Fork Coal Co	North Fork	Not	given	Non-Gaseous	1	Natural	Hendrie & Bolthoff	6 1/2			Steam		19,000		15
North Park Coal Co	Moore No 1	10	12°	Non-Gaseous	2	Fan						15,000		6	
North Park Coal Co	Moore No 3	226	8°	Non-Gaseous	1	Natural									
Nonnman & Fowler	Pagosa		15°	Non-Gaseous	1	Natural									
Oakdale Coal Co	Oakdale	1	12°	Gaseous	6	181	Jeffrey & Sirocco	9	110	2	Electric	77,100	50,000	124	
Ohio Creek Coal M Co	Ohio Creek		3°	Non-Gaseous	1	Fan						23,000	23,000	24	
Ohkrant Coal M Co	Ohkrant	Not	given	Non-Gaseous	1	Natural						2,000	2,000	2	
O K Coal Co	G. K			Non-Gaseous	1	Natural									
Pallando Coal & Supply Co	Pallando		1°	Non-Gaseous	1	Fan	Sirocco	6	220		Electric	19,000	23,000	48	
Phonla Coal Co	Phonla	400		Non-Gaseous	1	Natural									
Pike & Son	Jack O'Lantern	350		Non-Gaseous	1	Natural									
Pike Peak Consolidated Fuel Co	Pikeview	175		Non-Gaseous	2	Fan	Buffalo	5x6	180	1.0	Steam	3	3,000	48,495	50,215
Pine Fuel Co	Pine		4°	Non-Gaseous	1	Natural									
Pine Alton Coal Co	Freeman		10°	Non-Gaseous	1	Natural									
Pinebel Bros	Barnes		46°	Non-Gaseous	1	Natural									
Postal Coal M Co	Postal		7°	Non-Gaseous	1	Natural									
Prairie Canon Coal Co	Prairie Canon			Non-Gaseous	1	Natural									
Producers Coal Co	Phillip No 1 & 2	100	6°	Non-Gaseous	1	Natural									
Rankin, Chas. H.	Star (Thomas)			Non-Gaseous	1	Natural									
Rapson Coal M Co	Rapson No. 1	2500	10°	Gaseous	1	75	Cole		90	2	Steam		30,000	30,000	35
Rauman Coal Co	Rauman			Non-Gaseous	1	Natural									
Rasmussen, H. J.	City	799		Non-Gaseous	1	Natural									
Reynolds & Babcock	Black Diamond	325		Non-Gaseous	1	Natural						1,000	6,000	2	
Rile Coal Co	McLarn		8°	Non-Gaseous	1	Natural									
Rio Hondo Coal Co	Palmer	No re	port	Non-Gaseous	1	Natural									
Rocky Mountain Fuel Co	Industrial	265	1° 30°	Non-Gaseous	2	Fan	Cole	18	110	1	Steam	4	46,220	40,770	50,770
Rocky Mountain Fuel Co	Standard	265		Gaseous	2	Fan	Vulcan	14	120	1 1/2	Steam	3	30,000	11,200	32,000
Rocky Mountain Fuel Co	Vulcan	180		Gaseous	2	Fan	Clifford	11 1/2 x 3 1/2	120	1 1/2	Steam	4	60,000	40,000	66,500
Rocky Mountain Fuel Co	Arcine	186		Non-Gaseous	2	Fan	Cole	13	100	1	Steam	3	27,000	27,000	28,800
Rocky Mountain Fuel Co	Simmons	240		Non-Gaseous	1	Fan	Morris	12	123	1	Steam	4	90,000	82,000	88,000
Rocky Mountain Fuel Co	Gorham		13°	Non-Gaseous	1	Fan	Cole	5 1/2 x 3 1/2	135	3 1/2	Electric	2	31,000	8,110	34,000
Rocky Mountain Fuel Co	Alpine	150	7°	Non-Gaseous	1	Fan	Jeffrey	5 x 3 1/2	135	2	Electric	2	23,370	29,370	35,700
Rocky Mountain Fuel Co	Porbas	4500		Non-Gaseous	3	Fan	Crawford & McCrimmon	4 1/2 x 14	401	8	Electric		42,525	39,300	78
Rocky Mountain Fuel Co	La Belle			Gaseous	2	Fan	Buckeye	6	345	3	Electric		38,000		35,000
Rocky Mountain Fuel Co	Hedmont	2700		Gaseous	2	Fan	Buckeye	6	360	5	Electric		35,000		35,700
Rocky Mountain Fuel Co	Southwestern	2530		Gaseous	1	Fan (2)	Paddle & Stine	7	106	9	Electric		36,550	36,580	26,330
Rocky Mountain Fuel Co	Columbine	300	2° 5°	Non-Gaseous	13	Fan (2)	Jeffrey & Sirocco	10	275	1 1/2	Electric	2	100,000	100,000	100,000
Rocky Mountain Fuel Co	Grant	150		Non-Gaseous	2	Fan	Stine	6	265		Electric	3	36,000	36,000	38,000
Rocky Mountain Fuel Co	Frederick	400	32°	Non-Gaseous	1	Fan	Stine	18	77	4	Electric	4	32,000	31,600	33,600
Ross Coal Co	Roscoe			Non-Gaseous	1	Natural	McNabb & McCramon	6	100		Steam		17,000	16,500	40
Ross & Lorenzo	Gorham No 2	800		Non-Gaseous	1	Natural									
Routt-Pinnacle Coal Co	Routt-Pinnacle	300	17°	Non-Gaseous	1	Fan									
Royal Fuel Co	Royal	370	8°	Gaseous	7	30	Jeffrey	5	180	4	Electric		17,280	15,400	21
Rudisill, C. O.	Rutcher Knife	130	5°	Non-Gaseous	1	Natural									
Rugby Collieries Co	Rugby	1800	6°	Non-Gaseous	2	Fan	Stine	7	180		Electric	1	9,000	8,000	10,000
Russell, W. B. Coal Co	Russell	220		Non-Gaseous	1	Fan	Sturtevant	12	30		Steam	2	20,425	26,425	30,425
Santa Fe Coal Co	Santa Fe	100		Non-Gaseous	1	Fan	Stine	3			Steam				80
Shamrock Coal Co	Shamrock			Non-Gaseous	1	Fan	Stine	5	120		Electric	3	16,500	14,500	48
Smith-Tanner Coal Co	Smith-Tanner	832		Non-Gaseous	1	Natural									
Solar Coal Co	Tulbare	tunnel	53°	Gaseous	1	Fan									
South Canon Mine Leasing Co.	South Canon		2°	Non-Gaseous	1	Natural	Cole	12	30		Steam		130,000	110,000	10
Stanley Coal Co	Valley	2000	10°	Non-Gaseous	1	Natural									
Star Coal Co	Stiles	125		Non-Gaseous	1	Natural									
Stella Mae Coal Co	Stella Mae	350	12°	Non-Gaseous	1	Natural						3,712	3		

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(TENTH) ANNUAL REPORT
OF THE
STATE INSPECTOR
OF COAL MINES

1922



DENVER, COLORADO
EAMES BROTHERS, PRINTERS
1923

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PERSONNEL OF COAL MINE INSPECTION DEPARTMENT

JAMES DALRYMPLE, Chief Inspector.....Denver, Colo.
W. M. LAURIE, Deputy Inspector.....Trinidad, Colo.
HUGO H. MACHIN, Deputy Inspector.....Aguilar, Colo.
WILLIAM H. JAMES, Deputy Inspector.....Walsenburg, Colo.
JAMES W. GRAHAM, Deputy Inspector.....Lafayette, Colo.
HENRY P. KING, Deputy 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: Primero, Frederick, Sopris, Starkville, Morley, Engleville, Gray Creek, Boncarbo, Piedmont, La Belle, Jeffryes, Santa Fe, Bear Canon, Three Pine, Thor, Macoye, Baldy Mountain, Hines, Keystone, Leone, Henderson, Deep Vein, Liberty, Fisher's Peak, Pickford, Beshoar, Brown, Phillips, Star, Prospect, Toller, Forbes.

HUGO H. MACHIN, Box 334, Aguilar, Colo.....District No. 2
Includes the following mines: Lester, Ludlow, Rouse, Black Diamond, Rugby, Primrose, Star, Rapson, Southwestern, Jewel, Empire, Royal, Pryor, Cameron, Ravenwood, Ideal, Caprock, Hezron, Bunker Hill, Delagua, Cass, Tabasco, Greenville, Black Diamond, Berwind, Mutual, Brodhead.

WM. H. JAMES, 216 E. Indiana Ave., Walsenburg, Colo.....District No. 3
Includes the following mines: Oakdale, Reliance, Cad-dell, Cuchara Canon, Toltec, Pietou, Jobal, Maitland, New Maitland, Vesta, Gordon, Turner, Sunnyside, Kebler Nos. 1 and 2, Walsen, Robinson 1 and 2, and all mines in Fremont county.

JAMES W. GRAHAM, Lafayette, Colo.....District No. 4
Includes mines in the following counties: Adams, Boulder, El Paso, Jackson, Garfield, Gunnison, Mesa, Montrose, Ouray, Pitkin, and Rio Blanco.

HENRY P. KING, 1255 Lafayette St., Denver, Colo.....District No. 5
Includes mines in the following counties: Archuleta, Elbert, Jefferson, La Plata, Moffat, Montezuma, Routt, and Weld.

LETTER OF TRANSMITTAL

Denver, Colorado, May 21, 1923.

To His Excellency,
WILLIAM E. SWEET,
Governor of Colorado.

Sir: Herewith I have the honor to submit to you, in accordance with Section 37 of an Act entitled "Coal Mining Laws," the Tenth Annual Report of this department.

The period covered began January 1 and ended December 31, 1922.

Respectfully,

JAMES DALRYMPLE,
State Inspector of Coal Mines.

STATEMENT SHOWING RECEIPTS AND DISBURSEMENTS FROM JANUARY 1, TO DECEMBER 31, 1922

RECEIPTS

Tax collected on coal mined.....	\$ 25,957.49	
From sales of copies of the Coal Mining Laws.....	517.35	
From refund on mileage books and telegrams.....	55.40	
Balance brought forward from 1921.....	9,276.07	
Total.....		\$35,806.31

DISBURSEMENTS

Salary of chief inspector.....	\$ 4,400.00	
Salaries of five deputy inspectors.....	12,773.03	
Salaries of chief clerk and assistant clerk.....	3,300.00	
Expenses, chief and deputy inspectors.....	4,387.88	
Fatal accident investigators, per diem and expenses.....	182.50	
Mileage books (R. R. Transportation).....	1,080.00	
Automobiles, supplies, and repairs.....	2,297.93	
Board of Examiners, per diem and expenses.....	93.64	
Printing	1,914.05	
Postage	307.50	
Stationery supplies	230.66	
Telephone service.....	95.05	
Telegraph service	27.59	
Instruments	101.98	
Electrical supplies	19.08	
Express	15.06	
Miscellaneous	188.41	
Total.....		\$31,414.36
Surplus		\$ 4,391.95

FIELD EQUIPMENT

One Hupmobile Roadster Coupe	Five Speedometers
Three Dodge Touring Cars	One Carbon Monoxide Gas Detector
One Ford Touring Car	Five Marseant Safety Lamps
Seven Anemometers	Ten Koehler Safety Lamps
One Psychrometer	One Aneroid Barometer
One Geophone	One Burrell Gas Detector
One Gas Testing Box	

SUMMARY OF THE COAL PRODUCTION OF COLORADO, 1922

Number of mines operated.....	275
Number of new and old mines opened.....	36
Number of mines closed 16; abandoned 2; total.....	18
Tons of sub-bituminous coal produced.....	2,814,779
Tons of semi-bituminous coal produced.....	714,322
Tons of bituminous coal produced.....	6,441,444
Tons of anthracite coal produced.....	17,255
Tons of semi-anthracite coal produced.....	15,810
Total number of tons coal produced.....	10,003,610
Increase, 1922	861,663
Tons of run of mine coal produced.....	3,727,227
Tons of lump coal produced.....	2,852,582
Tons of nut coal produced.....	664,832
Tons of pea coal produced.....	73,115
Tons of slack coal produced.....	2,685,854
Percentage of slack produced.....	42.8-
Tons of coal mined by hand.....	4,904,874
Tons of coal mined by machine.....	5,098,736
Kind and number of machines used: Compressed air 176; Electric 297; total	473
Tons of coal mined for shipment.....	6,592,881
Tons of coal shipped out of the state.....	1,887,884
Tons of coal sold to local trade and used by employees.....	544,011
Tons of coal used at the mines for steam and heat.....	227,836
Tons of coal made into coke.....	750,998
Tons of coke made.....	490,668
Number of days coke ovens were operated.....	337.7
Number of coke ovens used.....	377
Number of men employed at coke ovens.....	173
Number of miners employed: Pick 4,824; Machine 3,770; total....	8,594
Total number of men employed in and about mines(average)....	13,436
Number of employees foreign born.....	6,222
Number of employees speaking English.....	12,363
Average number of days worked (man days).....	199.54
Daily production per miner.....	5.8
Annual production per miner.....	1,164+
Number and type of safety lamps used: Flame 833; Electric 4,906; total.....	5,739
Number of carbide lamps used.....	8,772
Number of pounds of carbide used (approximately).....	213,456
Number of pounds of permissible powder used.....	848,561
Number of pounds of black powder used.....	1,264,072
Number of pounds of dynamite powder used.....	28,598
Number of men killed: Underground 71; Surface 3; total.....	74
Number of men injured	1,724
Number of men killed per thousand employed.....	5.5+
Number of men injured per thousand employed.....	128.3+
Number of men killed per million tons of coal produced.....	7.39
Number of men injured per million tons of coal produced.....	172.3+
Number of tons of coal produced for each life lost.....	135,184
Number of tons of coal produced for each non-fatal accident.....	5,803
Number of men employed per fatal accident.....	181.6
Number of men employed per non-fatal accident.....	7.8
Number of widows left	48
Number of children left fatherless.....	107
Cost of development work in mines during 1922, 137 mines reporting	\$779,202.00
Number of days lost account of car shortage, 109 mines reporting	5,619
Number of tons of coal lost through shortage of labor, 37 mines reporting	489,975

Tenth Annual Report OF THE State Inspector of Coal Mines 1922

INTRODUCTION

The Tenth Annual Report compiled and tabulated by the State Inspector of Coal Mines is herewith presented.

The coal production of Colorado for the calendar year 1922 was 10,003,610 tons, an increase of 861,663 tons in comparison with the preceding year. The average number of men employed in and about the mines was 13,436, a decrease of 728 men compared with 1921, while the number of days worked was 199.54, a gain of 35.14 days over last year. The number of mines operated was 275, or 26 more mines than was recorded in the year before. Of these mines 131 have no railroad connections and supply local trade only.

There were 74 men killed in 1922, amounting to 5.5 per 1,000 employed, compared with 52 killed or 3.6 per 1,000 employed in 1921, and while seventeen lives were lost in the Sopris explosion, eleven lives were lost in the Oak Hills explosion and the Satanic fire in 1921. This increase in the loss of life is very discouraging because of the fact that so far as safety rules and safety devices are concerned, greater efforts than ever before were put forth during the past year, especially in the mines of Southern Colorado. It is a sad thing to say, but many of the accidents are the results of carelessness or incompetence on the part of the deceased or carelessness of the mine officials. All the safety measures in the world will not avail unless the underground worker is taught to protect himself, and the mine officials adhere strictly to the mining laws and the safety rules laid down in each mine. The non-fatal accidents numbered 1,724 and is an increase of 204, or 14 per cent more than in 1921.

In reviewing the coal industry of the State for the past year, the increase shown in the tonnage is rather remarkable, considering that there was a major strike effecting nearly all mines more or less, the greatest car shortage ever known, and a complete tie-up of The Denver & Salt Lake Railroad, by a cave-in which stopped transportation for over four months and at a time when the Routt county product is in great demand for storage purposes. Furthermore, to cap the climax of obstacles

to unhindered production, an unusually mild winter made a very slack domestic market. The strike failed to close up all the mines, many resumed operations almost immediately with curtailed labor and a very few were closed during the entire period of the trouble. The following figures show to what extent the strike effected the production. In April, the first month of the strike, the production fell from 984,159 tons in March to 401,674 tons in April. However, after that, it steadily increased each month and in August it was 952,556 tons, which is about normal.

Less coal was shipped out of the State than in 1921, consequently more coal was used for home consumption. This increase in the use of the product in the State cannot be charged to a heavy demand of the Pueblo Steel Works, as that plant did not resume increased activities until late in December. The railroad yards and many of the coal yards were well stocked with fuel when the strike began. Yet in the fall, the monthly tonnages ran as follows: September, 889,967 tons; October, 923,777 tons; November, 1,002,701, and December, 1,555,777 tons. Therefore, there was no coal shortage in Colorado, and had the railroad facilities been good and the demand for coal from outside of the State been greater, the total production could easily have been the greatest in its history, as there was plenty of labor available after the strike was ended, and the capacity of the mines is such, that a great demand can be met without further development. What the coal industry of Colorado needs is a wider field of distribution and better transportation facilities.

NEW MINES

Seven new mines were opened up during the year, none on a large scale. Only two have railroad connections at the present time. As very little data concerning them was furnished this office, little more than bare mention can be made of them.

GRIFFITHS MINE, Griffiths Coal Co., post office, Canon City, Fremont county. Manager, David Griffiths. This mine has a slope opening about 500 feet long and reached a coal bed three feet and ten inches thick of the semi-bituminous variety. The mine is laid out for 40-ton daily capacity and has no railroad connections. Total cost of development and equipment was about twelve thousand dollars.

MOORE NO. 2 MINE, The North Park Coal Co., post office, Coalmont, Jackson county. R. W. Moore, Jr., manager. This mine has a slope opening 500 feet long and a shaft opening 225 feet deep. The coal under exploitation ranges between 30 to 60 feet in thickness and is of the sub-bituminous variety. The coal at the present time is hoisted through the shaft. The mine

has a 50-ton daily capacity and is connected with the U. P. R. R. by a branch road known as The Colorado, Wyoming & Eastern Railroad.

CHRISTENSEN MINE, Christensen Coal Co., post office, Littleton, but the mine is located in Jefferson county. Victor Christensen, manager. This property is a slope opening about 300 feet long and the coal bed is from 12 to 14 feet thick of the sub-bituminous variety. It daily capacity is 100 tons. It has no railroad connections. Tipple, screens, scales and other equipment have been installed, and also necessary buildings erected at a cost of twenty-three thousand dollars.

YOUNG MINE, Young & Caddell, post office, Rapson, Las Animas county. Thomas Caddell, general superintendent. A slope 300 feet long was driven and connected with a coal bed three feet five inches thick of the bituminous variety. The mine has a daily capacity of forty tons and is located close to the C. & S. R. R. Cost to date of development work and necessary equipment is five thousand dollars.

McINTOSH MINE, McIntosh & Pritchard, post office, Trinidad, Las Animas county. This is a small wagon mine with a daily capacity of 15 tons. It is a drift opening 450 feet long and the coal mined is four and one-half feet thick and of the bituminous variety. Wm. Pritchard is the manager and the property at the present time represents an outlay of fifteen hundred dollars.

PHILLIP MINES NOS. 1 AND 2, Producers Coal Co., post office, Craig, Moffat county. John E. Daly, manager. This mine has two openings, one a slope about 100 feet long and the other a drift 380 feet long. The coal under exploitation belongs to the Middle Series of the Mesa Verde Group, and consists of six beds aggregating 44 feet in thickness of good bituminous coal. The mine is laid out for a 100-ton daily capacity and is equipped with boilers, engines, pumps, an air compressor, pipe lines, trackage and tipple. A wagon road three miles long was built. This property represents an outlay of fifty thousand dollars, and was opened with the expectation of having railroad connections in the near future.

MOUNT EVANS MINE, Mt. Evans Fuel Co., post office, Craig, Moffat county. A. A. Evans, manager. This mine has a slope 270 feet long and struck a coal bed 6 feet thick and of the bituminous variety. The mine at present has a daily capacity of 20 tons, which is sold to local trade for which purpose a wagon road was built. However, the purpose is to operate on a large scale when railroad connections are made. This property represents an outlay of twenty thousand dollars. Two small tipples were erected, some machinery installed and several buildings erected.

IMPROVEMENTS

The following is a statement of some of the improvements made by The Colorado Fuel & Iron Company to make their mines as safe as possible. Recently at the request of Robert McAllister, Company Inspector for The Colorado Fuel & Iron Company, I visited two of their mines, namely, the Frederick and Sopris No. 2, to see the effect of the sprays recently installed to assist the radiators in making the coal dust more wet.

The fine sprays are located on main haulage about 500 feet apart and branching at intervals into the air course. On partings where trips are made up, very large sprays are placed. The fine sprays are operated continuously when necessary. The large sprays are used to wet down the loaded cars before leaving the partings. In some instances similar sprays are used to wet down empty cars before entering the mine.

In the Frederick mine I found three men employed on main haulage roads gathering the fine coal and dust into little piles to be loaded out by the night shift. Sides and top of haulage roads wet and the fine coal on the bottom so wet that upon squeezing it in the hand wet balls were formed.

In Sopris No. 2, the conditions relative to dust while not as good as Frederick, show a great improvement in the last year and are very satisfactory.

The following is a table on sprinkling and humidifying systems installed by the Colorado Fuel & Iron Company in their mines in the Trinidad District during the past year:

Name of Mine	1-in. Pipe	2-in. Pipe	4-in. Pipe	8-in. Pipe	Small Sprays	Large Inside	Sprays Outside
Morley	150'	3,000'	.....	.....	6	1	....
Sopris No. 1.....	.....	3,500'	.....	.....	....	5	1
Sopris No. 2.....	500'	10,450'	.....	325'	....	7	1
Frederick	4,050'	2,400'	.....	.....	19	2	1
Primer	4,100'	5,400'	.....	.....	45	2	1
Tabasco	6,065'	4,433'	650'	.....	20	2	1
Berwind	2,800'	7,488'	894'	.....	5	1	....
Toller	2,741'	3,315'	.....	.....	35	7	....
Totals	20,406'	39,986'	1,544'	325'	130	27	5

NOTE: Sopris No. 2, 325 ft. of 8" pipe conveys steam from fan exhaust down drill hole to humidify inside mine. Toller, 5,000 ft. of 4" pipe, installed about two years ago and has been tapped for sprinkling line as well as serving its original purpose of drainage. Walsen-Robinson mines has installed 6,000 ft. of 1¼" to 2" pipe for humidity purposes.

In the Morley Slope mine, which already has two intakes and two returns, another opening will be started. The third entry is under construction at Frederick and at Sopris the fourth entry is being driven. All this work is being done for the purpose of increasing the ventilation as needed.

The following is a letter which was received from D. A. Stout, Mgr. F. D., Colorado Fuel & Iron Co., concerning safety devices being installed at some of their mines:

THE COLORADO FUEL AND IRON COMPANY,
PUEBLO, COLORADO.

D. A. Stout, Manager Fuel Department.

Mr. Jas. Dalrymple,
State Mine Inspector,
Denver, Colo.

March 16, 1923.

Dear Sir:

Sometime ago we had an automatic device installed at our Tabasco fan and power house whereby the power in the mine might be cut off in case the fan were to stop running or even the fan slowed down in speed. This device is worked through a contact in the fan building, which works a breaker within the power house and throws off the power over the entire mine. In conjunction with this and as a further safety measure we have installed a switch at our main slope hoist, which can be operated by the hoist man in case of runaway trips on the main slope. Should a runaway occur all he has to do is to throw off the power by pushing a button and thus relieve us of the danger of short circuits in the mine due to derailed trips. Our idea in throwing this was, of course, to reduce the chance for an explosion due to dust thrown into the mine by the wrecking of the trip. These devices are being installed at all of our mines, where there is a possible danger of this kind, and is a part of our program in trying to make our mines as safe as it is possible to make them.

From time to time as we develop other devices, we will be glad to advise you and will always welcome any suggestions you or your assistants may have in making the mines safer for those men who work underground.

I am inclosing for your information two prints of the device which we have at Tabasco mine.

Yours truly,

DAS-as

(Signed) D. A. STOUT.

The efforts being made by The Colorado Fuel & Iron Company to make their mines more safe are deserving of mention and other companies operating under similar conditions might benefit by following the example, and would advise making a thorough inquiry, including a visit to the mines above mentioned, so as to see the results for themselves.

The Royal Fuel Company, as their Royal Mine at Aguilar, Colorado, is putting down a new air shaft, 10x20 feet in the clear, so as to be able to properly ventilate the large acreage yet to be mined. Sprinkling lines have also been installed to properly take care of the coal dust.

FIRING OF SHOTS

Section 158 of the Coal Mining Laws provide that in mines where, in the judgment of the mine foreman, the roof is in such condition as to become dangerous if permitted to stand over night, he may by the employment of a shot examiner to examine each hole and the charge inserted, permit the miners to fire the cutting shots at the beginning of each shift and the remaining rib shots during the noon hour. If this privilege is abused it may be canceled by the Chief Inspector of Coal Mines. This privilege has been very much abused in most of the lignite mines. Shooting as above stated has been done and is still being done regardless of roof conditions, even in mines equipped with Oldroid cutting machines, undercutting to a depth of eight feet. Any practical man can readily see that a roof that will allow shots to a depth of eight feet to be fired is capable of supporting itself over night. Nevertheless, shooting during the day is done to as great an extent in those mines as in any other mines using puncher machines and undermining only half the depth of the others, then it is evident that the installing of the Oldroid machines has not improved working conditions. In my opinion, healthy conditions at the working faces are impossible during the day on account of powder smoke. Ninety per cent of all shots fired during the day are unnecessary on account of roof conditions.

Nearly all of the operators, mine officials, and miners in the lignite fields believe, or at least try to make others believe, that shooting during the day is an absolute necessity in the lignite mines. A few of the miners have appealed to me to assist them in doing away with the powder smoke nuisance during the day, but so long as the great majority of all the others directly connected with the question are in accord with the present methods, I can render them very little assistance. One or two of the companies, including The Pikes Peak Consolidated Fuel Company at Colorado Springs, Colorado, prohibit shooting during working hours, and in so doing neither the production of the mine or the wages of the miners have suffered.

In the interest of human life, I appeal to those who are in a position to remedy the conditions complained of, and if there is a doubt in the mind as to whether or not they can be remedied without loss, visit the Pikeview Mine and see for yourselves.

COAL MINE INSPECTION FUND

On account of lack of funds, the printing of the Inspectors Annual Report was delayed, also postponing the holding of examination for Coal Mine Officials, now a year over-due, and it may become necessary to lay off some of the inspectors. The Coal Operators turned down my request for an increase in the tax on coal from one-third of one cent to four-tenths of one cent per ton on

coal mined. A Bill was then presented to the Legislature carrying an appropriation of two thousand five hundred (\$2,500.00) per year, but failed to pass because it did not receive the approval of the Committee on Appropriations.

Total Inspections made in 1922.....	685
Total Producing Mines	275
Number of Fatal Accidents Investigated by Inspectors and Special Investigators.....	58
Number of Inquests Attended by Inspectors and Special Investigators	38
Scale Inspections	2
Complaints Investigated	17
Prosecutions	7
Miles Traveled by Auto.....	37,143
Miles Traveled by Railroad.....	21,600

PROSECUTIONS

Information for violation of the mining laws was filed with the District Attorney at Greeley, against eight miners and two mine foremen. They were all given a hearing, four of them pleaded guilty, five not guilty and trial set for 10:00 a. m. March 13th, 1923. The complainant never received any official notice of either hearing or trial, notwithstanding that he had written two letters to the District Attorney concerning them. Thirty minutes after the hour set for the trial, the District Attorney called me by telephone and wanted to know why I was not present at the trial. Upon telling him that I had no official notice, he said, "I will dismiss the whole thing and no further complaints will be received by me from your office." It is fortunate that there is only one coal producing county in his district and that he is the only District Attorney in the State that has no respect for the State or the laws governing it.

Respectfully submitted,

JAMES DALRYMPLE,
State Inspector of Coal Mines.

TABLE SHOWING
FATAL ACCIDENTS, AGE OF DECEASED, AND EXPER-
IENCE OF DECEASED FOR 1920, 1921 AND 1922

1920

Age of Deceased	Number of Accidents	Years of Experience	Number of Accidents
16 to 21 years.....	7	0 to 5 years	26
21 to 25 years.....	6	5 to 10 years	19
25 to 30 years.....	13	10 to 15 years	6
30 to 35 years.....	12	15 to 20 years	5
35 to 40 years.....	9	20 to 25 years	3
40 to 45 years.....	10	25 to 30 years	3
45 to 50 years.....	3	30 to 35 years	4
50 to 60 years.....	6	35 to 40 years	0
Not given.....	4	Not given	4
Total.....	70		70

1921

Age of Deceased	Number of Accidents	Years of Experience	Number of Accidents
16 to 21 years.....	5	0 to 5 years	15
21 to 25 years.....	5	5 to 10 years	12
25 to 30 years.....	2	10 to 15 years	4
30 to 35 years.....	9	15 to 20 years	5
35 to 40 years.....	13	20 to 25 years	5
40 to 45 years.....	6	25 to 30 years	3
45 to 50 years.....	3	30 to 35 years	1
50 to 60 years.....	4	35 to 40 years	1
Not given.....	5	Not given	6
Total.....	52		52

1922

Age of Deceased	Number of Accidents	Years of Experience	Number of Accidents
16 to 21 years.....	6	0 to 5 years	29
21 to 25 years.....	10	5 to 10 years	20
25 to 30 years.....	11	10 to 15 years	13
30 to 35 years.....	11	15 to 20 years	6
35 to 40 years.....	11	20 to 25 years	1
40 to 45 years.....	10	25 to 30 years	2
45 to 50 years.....	7	30 to 35 years	2
50 to 60 years.....	6	35 to 40 years	0
Not given.....	2	Not given	1
Total.....	74		74

Fort Lupton Coal Co.	1	Witherbee	8,188	3,400	100	8,188	3,400	100
Fox Coal M. Co.	5	Fox	40,317	17,750	300	57,585	17,750	300
French & Fielding	.....	School Sec. Lease	2,217	25	.....	2,217	25	.....
Fruth & Stone	.....	Leader	10,490	.....	.....	10,490	.....	.....
Garfield Coal M. & T. Co.	1	Garfield	15,978	4,034	.....	20,012	.....	.....
Gates Lumber & Coal Co.	.....	Gates	545	625	.....	545	625	.....
Gibson Lumber & Fuel Co.	.....	Royal Gorge	17,467	7,500	.....	17,467	7,500	.....
Gilson Asphaltum Co.	1	Carbonera	9,960	.....	.....	9,960	.....	.....
Golden Dawn Coal Co.	1	Golden Dawn	1,992	.....	.....	1,992	.....	.....
Gordon Coal Co.	5	Gordon	4,457	14,825	450	46,216	14,825	450
Grand Junction M. & F. Co.	4	Cameo	38,059	1,650	2,000	78,158	1,650	2,000
Grand Junction M. & F. Co.	3	Sterling	1,014	16,900	.....	83,016	16,900	.....
Green Valley Coal Co.	.....	Green Valley	4,565	1,875	.....	4,565	1,875	.....
Griffiths Coal Co.	1	Griffiths	835	2,375	200	9,132	2,375	200
Hall, A. W. & Son	.....	Red Mountain	4,543	750	.....	4,543	750	.....
Hart Coal Co.	.....	Hart	356	.....	.....	356	.....	.....
Hawkeye Coal Co.	.....	McDowell	246	225	.....	246	225	.....
Hayden Bros. Coal Corp.	.....	Hayden	37,746	21,350	.....	37,746	21,350	.....
Hayden Valley Mutual Coal Co.	.....	Dry Creek	2,646	2,500	.....	2,646	2,500	.....
Henderson, F. E.	.....	Peacock	385	50	.....	385	50	.....
Hesperus, Fuel Co.	.....	Hesperus	5,259	.....	.....	5,259	.....	.....
Hidden Treasure M. Co.	.....	Hidden Treasure	302	.....	.....	302	.....	.....
Holland, W. C.	.....	Riverside	3,062	275	.....	3,062	275	.....
Huerfano Coal Co.	3	Ludlow	69,464	11,922	.....	81,386	11,922	.....
Hunter, J. B.	.....	Hunter	326	150	.....	326	150	.....
Independent Coal Co.	.....	Independent	959	325	.....	959	325	.....
International Fuel Corp.	.....	Wolf Creek	9,128	3,125	100	9,128	3,125	100
International Fuel Corp.	8	Evans	88,361	44,625	.....	88,361	44,625	.....
Investors Securities Co.	.....	Security	2,207	875	.....	2,207	875	.....
Irons, Wm. & Son	.....	Baldy	4,512	.....	.....	4,512	.....	.....
Jeffreys Fuel Co.	3	Jeffreys	7,400	21,474	.....	21,474	21,474	.....
Jewel Collieries Co.	3	Jewel	4,430	20,956	.....	20,956	20,956	.....
Joerger Fuel Co.	.....	Beshoar	2,008	2,008	.....	2,008	2,008	.....
Jones & Trachta	.....	Douglas Creek	131	100	.....	131	100	.....
Juanita Coal & Coke	.....	King	78,135	11,250	.....	78,135	11,250	.....
Katala, Ludwig	.....	Prospect	120	60	.....	120	60	.....
Keota Coal M. Co.	.....	Hill	518	1,125	.....	518	1,125	.....
Keystone Mining Co.	2	Keystone	18,196	32,542	.....	50,738	32,542	.....
Leone, L.	.....	Leone	445	445	.....	445	445	.....
Leyden Coal Co.	11	Leyden No. 3	74,850	99,537	200	174,387	99,537	200

TABLE No. 4—Continued
MINING MACHINES AND EXPLOSIVES USED AT COAL MINES IN THE STATE OF COLORADO FOR YEAR ENDED
DECEMBER 31, 1922.

Name of Operator	Name of Mine	Mining Machines		Coal Mined by (Short Tons)			Explosives Used (Pounds)		
		No. Operated by Compressed Air	No. Operated by Electricity	Hand	Machine	Total	Black Powder	Dynamite	Permissible Explosives
Liberty Coal Co.	Liberty	.....	.....	4,211	.....	4,211	.....	.....	.....
Liberty Coal & Merc. Co.	Nearing	.....	.....	233	.....	233	.....	.....	.....
Lohman, Dan. C.	Bear Cat	.....	.....	147	.....	147	50	.....	.....
MacCormac Coal Co.	Red Ash	.....	.....	7,693	.....	7,693	.....	.....	.....
Mancos Mesa Coal Co.	Mancos	.....	.....	208	.....	208	100	136	.....
Marchetti, J. R.	Marion	.....	.....	2,589	.....	2,589	.....	.....	800
Marsh, R.	Fishers Peak	.....	.....	682	.....	682	.....	.....	.....
Mattivi & Son	Bunker Hill	.....	.....	3,500	.....	3,500	.....	.....	200
McDowell Coal Co.	Berry	.....	.....	1,555	.....	1,555	100	.....	.....
McGinley, Wm.	McGinley	.....	.....	182	.....	182	.....	.....	.....
McGovern Coal Co.	Mallot	.....	.....	2,350	.....	2,350	.....	.....	.....
McIntosh & Pritchard	McIntosh	.....	.....	644	.....	644	.....	.....	.....
McLean Coal Co.	Bluff Springs	1	.....	.....	6,236	6,236	250	400	.....
McLendon & Kennedy	Stove Canon	.....	.....	1,871	.....	1,871	750	.....	.....
McMillin Coal Co.	Rollins	1	.....	.....	1,208	1,208	300	.....	.....
McNally & Thompson	Maitland	.....	5	.....	44,933	44,933	11,250	.....	1,800
McNeil Coal Co.	MacGregor	.....	5	.....	33,387	33,387	10,350	100	.....
Meeker Coal & Dev. Co.	Meeker No. 1	.....	.....	249	.....	249	200	.....	.....
Mesa Coal Co.	Winger	.....	.....	1,952	.....	1,952	250	.....	.....
Midway Co.	Midway	.....	.....	320	.....	320	.....	.....	.....
Midwest Coal Co.	Midwest	.....	.....	4,374	4,543	8,917	3,750	.....	.....
Miners Coal & Coke Co.	Williams	1	.....	.....	1,215	1,215	.....	.....	200
Mingan, Mike	Kurtzville	.....	.....	317	.....	317	125	.....	.....

Minnie Coal Co.	4	931	11,017	931	400
Moffat Coal Co.	3	68,830	6,799	79,847	3,550
Moffat Coal Co.	1	42,471	6,025	49,270	2,191
Mountain View Coal Co.	1	957	6,025	5,957	50
Mt. Evans Fuel Co.	5	24,849	106,277	131,126	3,000
Mutual Coal Co.	9	6,105	109,223	115,328	8,000
National Fuel Co.	13	53,132	10,075	63,207	325
National Fuel Co.	1	7,911	248,281	256,192	6,000
Naturita Stores Co.	2	657	12,989	657	1,000
Nonpareil Coal Corp.	2	1,350	57,801	12,989	150
North Fork Coal Co.	1	3,507	3,507	57,801	2,000
North Park Coal Co.	1	248	9,930	2,375	1,000
North Park Coal Co.	1	11,810	9,930	200	100
Nossaman & Fowler	3	142,750	4,504	147,254	600
Oakdale Coal Co.	1	2,512	18,500	2,536	20,600
Ohio Creek Coal M. Co.	1	275	2,512	21,012	7,000
Ohkraut Coal M. Co.	1	4,868	275	275	625
O. K. Coal Co.	1	11,810	9,930	4,868	275
Palisade Coal & Supply Co.	1	10,378	10,378	21,740	9,275
Paonia Coal Co.	6	1,918	162,519	10,378	145
Petry & Son	1	82,704	1,410	1,918	325
Pikes Peak Consolidated Fuel Co.	1	463	1,410	245,223	50
Pine Fuel Co.	1	353	463	1,410	6
Pinos Altos Coal Co.	1	3,265	353	463	100
Pischel Bros.	1	3,265	3,265	353	200
Postal Coal M. Co.	1	8,167	6,429	3,265	3,000
Prairie Canon Coal Co.	2	2,621	2,621	14,596	200
Producers Coal Co.	2	1,000	1,000	1,000	2,300
Rankin, Chas. H.	2	16,082	16,082	6,875	500
Rapson Coal M. Co.	7	1,316	1,316	16,082	2,300
Rauman Coal Co.	1	1,154	1,154	1,316	10
Rasmussen, H. J.	1	582	1,813	1,154	5
Reynolds & Babcock	1	459	582	1,813	500
Rifle Coal Co.	1	16,320	85,060	582	138
Rio Blanco Coal Co.	1	7,484	44,469	459	454
Rocky Mountain Fuel Co.	8	7,916	40,580	101,380	138
Rocky Mountain Fuel Co.	7	4,397	39,696	51,953	14,075
Rocky Mountain Fuel Co.	8	4,397	39,696	44,093	454

*Not in use.

TABLE No. 4—Continued

MINING MACHINES AND EXPLOSIVES USED AT COAL MINES IN THE STATE OF COLORADO FOR YEAR ENDED DECEMBER 31, 1922.

Name of Operator	Name of Mine	Mining Machines		Coal Mined by (Short Tons)			Explosives Used (Pounds)		
		No. Operated by Compressed Air	No. Operated by Electricity	Hand	Machine	Total	Black Powder	Dynamite	Permissible
Rocky Mountain Fuel Co.	Simpson	13	.....	15,747	34,224	34,224	11,465	.....	.....
Rocky Mountain Fuel Co.	Gorham	4	.....	14,720	8,340	24,087	4,166	.....	.....
Rocky Mountain Fuel Co.	Alpine	.....	.....	14,720	11,362	26,082	5,575	.....	.....
Rocky Mountain Fuel Co.	Forbes	.....	2	43,561	22,200	65,761	.....	.....	10,577
Rocky Mountain Fuel Co.	La Belle	.....	1	26,104	11,188	37,292	.....	.....	11,932
Rocky Mountain Fuel Co.	Piedmont	.....	.....	4,567	1,941	6,508	.....	.....	2,106
Rocky Mountain Fuel Co.	Southwestern	.....	1	5,741	.....	5,741	.....	.....	494
Rocky Mountain Fuel Co.	Columbine	.....	9	7,675	402,161	409,836	59,325	.....	83,050
Rocky Mountain Fuel Co.	Grant	.....	5	3,585	70,410	73,995	21,937	.....	.....
Rocky Mountain Fuel Co.	Frederick	4	.....	1,117	11,521	18,638	7,084	.....	.....
Ross Coal Co.	Horace	2	.....	.....	9,033	9,033	5,875	1,000	75
Ross & Lorenzo	Gorham No. 2	1	.....	.....	2,059	2,059	1,100	.....	.....
Routt-Pinnacle Coal Co.	Routt-Pinnacle	.....	2	4,329	718	5,047	3,750	500	.....
Royal Fuel Co.	Royal	.....	.....	166,679	.....	166,679	.....	155	1,747
Rudisill, C. O.	Butcher Knife	.....	.....	800	.....	800	.....	.....	.....
Rugby Collieries Co.	Rugby	.....	.....	16,842	.....	16,842	.....	.....	.....
Russell, W. E. Coal Co.	Russell	9	.....	3,654	69,306	72,960	22,950	50	.....
Santa Fe Coal Co.	Santa Fe	.....	.....	27,167	.....	27,167	.....	50	7,950
Shamrock Coal Co.	Shamrock	.....	2	.....	68,300	68,300	.....	.....	.....
Smith-Tanner Coal Co.	Smith-Tanner	.....	.....	641	.....	641	75	.....	.....
Solar Coal Co.	Tulbure	.....	.....	178	.....	178	500	200	.....
South Canon Mine Leasing Co.	South Canon	.....	.....	5,348	.....	5,348	.....	.....	1,600
Stanley Coal Co.	Stanley	.....	.....	19,029	.....	19,029	.....	.....	2,500

Star Coal Co.	Valley	1,016	1,016	1,016	1,150	100
States Coal Co.	States	1,226	1,226	1,226	425	
Stella Mae Coal Co.	Stella Mae	610	610	610	1,000	
Stillwagon Bros.	Old Coalby	555	555	555	250	
Stokes, W. D.	Stokes	3,724	3,724	3,724	1,875	200
Sunland Coal Co.	Sunland	3,761	3,761	25,958	8,750	100
Sunshine Coal Co.	Sunshine	10,097	10,097	10,097	2,125	
Sunnyside Coal M. Co.	Sunnyside	8,684	57,735	66,419	26,750	1,500
Sweet, Fred J.	Caprock	5,948	5,948	5,948		
Temple Fuel Co.	Brodhead No. 9	10,205	91,850	102,055	4,000	24,000
Temple Fuel Co.	Brodhead No. 10	3,388	7,400	10,788		2,000
Thomas Coal Co.	Thomas	1,869		1,869	2,250	110
Three Pines Coal Co.	Three Pines	19,178	19,178	19,178		1,750
Toawac Ute Reservation	Indian School	524		524		
Triangle Coal Co.	Triangle	4,618		4,618	750	
Trinidad Coal Co.	Baldy Mt.	3,974		3,974		350
Trinidad Coal Co.	Ferrell	374		374	250	50
Twin Mesa Coal Co.	Twin Mesa	539		539	750	
Union Coal & Coke Co.	Pryor	38,892	33,496	72,388		50
United Collieries Co.	Monroe		40,253	40,253	12,500	4,485
Utah Fuel Co.	Somerset	261,643		261,643		22,350
Vesta Mines Inc.	Vesta	3	17,734	23,645	4,025	600
Vezzetti & Moschetti	Brookside	5,911	21,383	21,383	3,625	50
Victor-American Fuel Co.	Chandler	329	91,324	91,653		18,694
Victor-American Fuel Co.	Radiant	4	40,045	44,649	26,175	1,793
Victor-American Fuel Co.	Ravenwood	24,070	32,447	56,517		8,524
Victor-American Fuel Co.	Delagua	285,673	141,231	426,904		22,388
Victor-American Fuel Co.	Cass	18,087	104,846	122,933		13,368
Victor-American Fuel Co.	Hastings	6	13,308	27,894		3,521
Victor-American Fuel Co.	Pinnacle	2	42,884	42,884	37,725	305
Victor-American Fuel Co.	Wadge	4	4,283	22,252	10,900	184
Walker Land & C. Co.	Walker	2,400		2,400	2,600	
Weed, A. J.	Independent	141		141		
White River Lumber Co.	Lion Canon	1,132		1,132	1,350	
Williamsburg Coal Co.	Williamsburg Slope	5,039		5,059	10,000	
Wilton Coal Co.	Pritchard	2,424		2,424		50
Winton Coal Co.	Winton	564		564	875	
Wyatt, T. H.	Sarcillo	140		140		
Wyoming & Utah Coal Co.	Rainbow	1,200	5,083	6,283		2,283
Yampa Collieries Co.	Yampa	5,568		5,568	3,625	
Young & Caddell	Young	1,242		1,242		
Totals		4,904,874	5,098,736	10,003,610	1,264,072	848,561
		297		28,598		

*Not in use.

†Only two in use.

TABLE No. 6

PRODUCTION AND DISTRIBUTION OF COAL FROM ALL THE MINES
IN THE STATE OF COLORADO FOR THE YEAR ENDING
DECEMBER 31, 1922.

Total Production Distributed	Loaded at Mines for Shipment	Sold to Local Trade and Used by Employees	Used at Mines for Steam and Heat	Coal Made Into Coke	Coke Made
10,003,610	8,480,765	544,011	227,836	750,998	490,668

TABLE No. 5

Table No. 5 omitted. Applies to metal mining.

TABLE No. 7
NUMBER INJURED IN COAL MINES DURING THE CALENDAR YEAR ENDING DECEMBER 31, 1922.

CAUSES	Permanent Total Disability	Permanent Partial Disability	Temporary Disability		Total Injuries
			Time Lost More Than 14 Days	Time Lost Less Than 14 Days	
Underground—					
1. Falls of roof (coal, rock, etc.)	1	5	267	221	494
2. Falls of face or pillar coal	.....	.....	51	34	85
3. Mine cars and locomotives	2	3	230	191	426
4. Gas explosions and burning gas	.....	1	5	3	9
5. Coal-dust explosions (including gas and dust combined)	.....	.....	.....	.....	.....
6. Explosives	1	.....	7	.....	8
7. Suffocation from mine gas	.....	.....	.....	1	1
8. Electricity	.....	.....	8	5	13
9. Animals	.....	.....	46	44	90
10. Mining machines	.....	2	44	39	85
11. Mines fires (burned, suffocated, etc.)	.....	.....	.....	.....	.....
12. Other causes	.....	3	146	230	379
In Shaft—					
13. Falling down shafts or slopes	.....	.....	.....	2	2
14. Objects falling down shafts or slopes	.....	.....	5	.....	5
15. Cages or skips	.....	.....	.....	.....	.....
16. Other causes	.....	.....	.....	.....	.....
Total number injured in mine	4	14	809	770	1,597
On Surface—					
17. Mine cars and mine locomotives	.....	.....	16	14	30
18. Electricity	.....	.....	3	5	8
19. Machinery	.....	.....	18	9	27
20. Boiler explosions or bursting steam pipes	.....	1	.....	1	2
21. Railway cars and locomotives	.....	.....	5	15	20
22. Other causes	.....	.....	20	20	40
Total number injured on the surface	.....	1	62	64	127
GRAND TOTAL	4	15	871	834	1,724

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.

TABLE No. 8
COAL MINE FATALITIES IN THE STATE OF COLORADO, CLASSIFIED BY CAUSE AND OCCUPATION, FOR YEAR ENDED
DECEMBER, 31, 1922.

CAUSES	UNDERGROUND AND SHAFT															Surface Fatalities	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
Underground—																	
1. Falls of roof (coal, rock, etc.)				10	8			1				1				1	21
2. Falls of face or pillar coal				15	2			1			1					1	19
3. Mine cars and locomotives				1				5	2								9
4. Gas explosions and burning gas																	
5. Coal-dust explosions (including gas and dust combined)				6	1	8				2							17
6. Explosives				1													1
7. Suffocation from mine gases																	
8. Electricity (shock or burns)					2			1									3
9. Animals																	
10. Mining machines																	
11. Mine fires (burned, suffocated, etc.)																	
12. Other causes																	
Shaft—																	
13. Falling down shafts or slopes																	
14. Objects falling down shaft or slopes																	
15. Cages or skips																1	1
16. Other causes																	
Total Underground..				33	13	8		8		2	1	1				3	71

	214	70	169	4,824	3,770	558	164	1,074	264	79	363	496	141	101	480	12,767	
Surface—																	
17. Mine cars and mine locomotives (shock or burns)															1		1
18. Electricity (shock or burns)														1			1
19. Machinery																	
20. Boiler explosions or bursting steam pipes																	
21. Railway cars and locomotives																	
22. Other causes				1													1
Total				1													3
Grand total				34	13	8		8		2	1	1			4	71	74
Number employed in each occupation (a)	214	70	169	4,824	3,770	558	164	1,074	264	79	363	496	141	101	480	12,767	....

(a) To be supplied from Table 10.

TABLE No. 10

COAL MINE EMPLOYEES CLASSIFIED BY OCCUPATION IN THE STATE
OF COLORADO DURING YEAR ENDED DECEMBER 31, 1922.

UNDERGROUND		Employed In and Around the Mines of Colorado
1. Foremen		214
2. Assistant foremen		70
3. Fire bosses.....		169
4. Pick miners		4,824
5. Machine miners		3,770
6. Machine runners and scrapers		558
7. Shot firers		164
8. Drivers and runners		1,074
9. Motormen and assistants.....		264
10. Doorboys and helpers		79
11. Trackmen and bratticemen		363
12. Timbermen and rockmen		496
13. Pumpmen and pipemen		141
14. Electricians and helpers.....		101
15. All others		480
Total underground.....		12,767
SURFACE		
1. Superintendents		152
2. Foremen		74
3. Blacksmiths and carpenters		291
4. Engineers and firemen		340
5. Machinists and helpers		88
6. Trackmen and helpers.....		32
7. All others at mine		1,185
8. Coke-oven employes		173
9. Office employees		146
Total surface		2,476
Total employees		15,243
Number of days men worked during year.....		199.54

Table No. 9 omitted, is covered by Table No. 8. Applies to Metal Mining.
Above poll taken in December, 1922.

[illegible]

[illegible]

TABLE A—Continued

COMPANIES	Total Production	Number of Men Employed	Number of Fatal Accidents	Number of Men Employed per Fatal Accident	Number of Tons Produced per Fatal Accident	Number of Non- Fatal Accidents	No. of Men Em- ployed per Non- Fatal Accident	Number of Tons Produced per Non Fatal Accident	Killed per 1,000 Employed	Injured per 1,000 Employed
McMillin Coal Co.....	1,208	2								136.4
McNally & Thompson.....	44,933	66				9	7.3	4,993		58.0
McNeil Coal Co.....	33,387	69			33,387	4	17.3	8,347	14.5	
Meeker Coal Mining & Dev. Co.....	249	11	1	69.0						250.0
Mesa Coal Co.....	1,952	4				1	4.0	1,952		
Midway Co.....	320	3								
Midwest Coal Co.....	8,917	25	1	25.0	8,917	2	12.5	4,459	40.0	80.0
Miners Coal & Coke Co.....	1,215	9								
Mingam, Mike.....	317	2								
Minnie Coal Co.....	931	3								
Moffat Coal Co.....	129,117	197	1	197.0	129,117	25	7.9	5,165	5.1	126.9
Mountain View Coal Co.....	6,025	9								
Mt. Evans Fuel Co.....	957	6								66.7
Mutual Coal Co.....	131,126	135				9	15.0	14,569		110.6
National Fuel Co.....	434,727	470	1	470.0	434,727	52	9.0	8,360	2.1	
Naturita Stores Co.....	657	2								
Nonpareil Coal Corp.....	12,989	49								
North Fork Coal Co.....	1,350	10								
North Park Coal Co.....	61,308	64				7	9.1	8,758		109.4
Nossaman & Fowler.....	248	3								
Oakdale Coal Co.....	147,254	162	3	54.0	49,035	18	9.0	8,181	18.5	111.1
Ohio Creek Coal Mining Co.....	21,012	30	1	30.0	21,012	3	10.0	7,004	33.3	100.0
Ohkrant Coal Mining Co.....	275	1								
O. K. Coal Co.....	4,868	6				2	3.0	2,434		333.3
Palisade Coal & Supply Co.....	21,740	42				5	8.4	4,348		119.0
Paonia Coal Co.....	10,378	7								
Petry & Son.....	1,918	5				1	5.0	1,918		200.0
Pikes Peak Consolidated Fuel Co.....	245,223	169				10	16.9	24,522		59.2
Pine Fuel Co.....	1,410	4								

[illegible]

TABLE A—Continued

COMPANIES	Total Production	Number of Men Employed	Fatal Accidents	Number of Men Employed per Fatal Accident	Number of Tons Produced per Fatal Accident	Number of Non- Fatal Accidents	No. of Men Em- ployed per Non- Fatal Accident	Number of Tons Produced per Non-Fatal Accident	Killed per 1,000 Employed	Injured per 1,000 Employed
Trinidad Coal Co.....	4,348	8	.....	.....	.....	1	8.0	4,348	.....	125.0
Twin Mesa Coal Co.....	539	4	.....	.....	.....	.....	.....	.....	.....	.....
Union Coal & Coke Co.....	72,388	85	.....	.....	.....	9	9.4	8,043	.....	105.9
United Collieries Co.....	40,253	33	.....	.....	.....	6	5.5	6,709	.....	181.8
Utah Fuel Co.....	261,643	200	1	200.0	261,643	24	8.3	10,302	5.0	120.0
Vesta Mines Inc.....	23,645	50	.....	.....	.....	6	8.3	3,941	.....	120.0
Vezzetti & Moschetti.....	21,383	15	.....	.....	.....	.....	.....	.....	.....	.....
Victor-American Fuel Co.....	835,686	1,166	5	233.2	167,137	350	3.3	2,388	4.3	300.2
Walker Land & C. Co.....	2,400	3	.....	.....	.....	.....	.....	.....	.....	.....
Weed, A. J.....	141	2	.....	.....	.....	.....	.....	.....	.....	.....
White River Lumber Co.....	1,132	2	.....	.....	.....	.....	.....	.....	.....	.....
Williamsburg Coal Co.....	5,059	6	.....	.....	.....	.....	.....	.....	.....	.....
Wilton Coal Co.....	2,424	3	.....	.....	.....	.....	.....	.....	.....	.....
Winton Coal Co.....	564	2	.....	.....	.....	.....	.....	.....	.....	.....
Wyatt, T. H.....	140	4	.....	.....	.....	.....	.....	.....	.....	.....
Wyoming-Utah Coal Co.....	6,283	34	.....	.....	.....	.....	.....	.....	.....	.....
Yampa Collieries Co.....	5,568	24	.....	.....	.....	.....	.....	.....	.....	.....
Young & Caddell.....	1,242	6	.....	.....	.....	.....	.....	.....	.....	.....
For the State of Colorado.....	10,003,610	13,436	74	181.6	135,184	1,724	7.8	5,803	5.51—	128.3+

TABLE B

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 1922, AND CAPACITY OF MINE PER DAY IN TONS.

ADAMS 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
Parkdale.....	Etchell & Sons.....	Lafayette.....	Sub-bituminous..	70	3	481	10
Totals—Number	of Mines Operated, 1.....	.....	.....	70	3	481	.....

ARCHULETA COUNTY

Pagosa.....	Nossaman & Fowler.....	Pagosa Springs..	Sub-bituminous..	26	3	248	3
Totals—Number	of Mines Operated, 1.....	.....	.....	26	3	248	.....

BOULDER COUNTY

Industrial.....	Rocky Mountain Fuel Co.....	Superior.....	Sub-bituminous.....	255.7	98	101,880	800
Standard.....	Rocky Mountain Fuel Co.....	Lafayette.....	Sub-bituminous.....	157.6	72	51,953	300
Vulcan.....	Rocky Mountain Fuel Co.....	Lafayette.....	Sub-bituminous.....	222.3	46	48,496	225
Acme.....	Rocky Mountain Fuel Co.....	Lafayette.....	Sub-bituminous.....	158	59	44,993	300
Simpson.....	Rocky Mountain Fuel Co.....	Lafayette.....	Sub-bituminous.....	166	22	34,224	600
Gorham.....	Rocky Mountain Fuel Co.....	Gorham.....	Sub-bituminous.....	121.9	32	24,987	200
Monarch.....	National Fuel Co.....	Broomfield.....	Sub-bituminous.....	229.4	157	115,328	1,000
Centennial.....	Big Four Coal & Coke Co.....	Louisville.....	Sub-bituminous.....	118.5	119	74,870	1,000
Fox.....	Fox Coal Mining Co.....	Gorham.....	Sub-bituminous.....	229	74	57,585	500
Crown.....	Crown Fuel Co.....	Crown.....	Sub-bituminous.....	232.1	65	48,304	600
Sunland.....	Sunland Coal Co.....	Louisville.....	Sub-bituminous.....	100	82	25,958	450
Black Diamond.....	Boulder Black Diamond Coal Co.....	Boulder.....	Sub-bituminous.....	224	22	24,395	300
Nonpareil.....	Nonpareil Coal Corp.....	Louisville.....	Sub-bituminous.....	83.8	49	12,889	300
Capitol.....	Ajax Coal M. Co.....	Louisville.....	Sub-bituminous.....	187	27	19,762	150
Cracker Jack.....	Cracker Jack Coal Co.....	Boulder.....	Sub-bituminous.....	198	7	7,998	75
Cambro.....	Co-operative Fuel Corporation.....	Lafayette.....	Sub-bituminous.....	125	12	4,604	100
Red Ash.....	MacCormac Coal Co.....	Gorham.....	Sub-bituminous.....	98.2	18	7,693	.....
Gorham No. 2 (Ross).....	Ross & Lorenzo.....	Gorham.....	Sub-bituminous.....	232	4	2,059	10
Lewis (Davies).....	Davies Coal Co.....	Gorham.....	Sub-bituminous.....	226	3	1,452	40
Cactus.....	Cactus Coal Co.....	Gorham.....	Sub-bituminous.....	185	4	2,300	.....
Independent.....	Independent Coal Co.....	Boulder.....	Sub-bituminous.....	175	4	959	.....
Blue Goose.....	Blue Goose Coal Co.....	Boulder.....	Sub-bituminous.....	88	6	877	.....
Totals—Number.....	of Mines Operated, 22.....	.....	.....	177.4	982	711,476	.....

TABLE B—Continued

DELTA 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
King.....	Jaunita Coal & Coke Co.....	Bowie.....	Bituminous.....	188	71	78,135	650
Paonia.....	Paonia Coal Co.....	Paonia.....	Bituminous.....	206	7	10,378	75
Berry.....	McDowell Coal Co.....	Paonia.....	Bituminous.....	119	3	1,555	20
North Fork	North Fork Coal Co.....	Paonia.....	Bituminous.....	57	10	1,550	30
Converse.....	Frank Converse.....	Paonia.....	Bituminous.....	174	2	1,335	30
Red Mountain.....	A. W. Hall & Son.....	Cedaredge.....	Semi-bituminous.....	238	6	4,543	35
Green Valley.....	Green Valley Coal Co.....	Cedaredge.....	Semi-bituminous.....	267	4	4,565	45
Coalby Red Canon	Frank M. Fickes.....	Cedaredge.....	Semi-bituminous.....	228	3	1,595	20
Old Coalby.....	Stillwagon Bros.....	Cedaredge.....	Semi-bituminous.....	164	1	555	20
States.....	States Coal Co.....	Cedaredge.....	Semi-bituminous.....	187	2	1,226	50
Winton.....	Winton Coal Co.....	Cedaredge.....	Semi-bituminous.....	147	2	564	50
Independent.....	A. J. Weed.....	Cedaredge.....	Semi-bituminous.....	21	2	141	30
Rollins.....	McMillin Coal Co.....	Delta.....	Semi-bituminous.....	147	2	1,208	30
Fairview.....	James Aspel.....	Delta.....	Semi-bituminous.....	235	2	805	.....
Kurtzville.....	Mike Mingan.....	Hotchkiss.....	Semi-bituminous.....	90	2	317	.....
De Graffenried.....	J. R. De Graffenried.....	Hotchkiss.....	Semi-bituminous.....	60	2	210	.....
Bennett.....	Roy Bennett.....	Hotchkiss.....	Semi-bituminous.....	25	2	125	.....
Totals—Number	of Mines Operated, 17.....			172.6	123	108,607	.....

ELBERT COUNTY

Security (White Ash) Wright.....	Investors Securities Co.....	Matheson.....	Sub-bituminous.....	57	26	2,207	100
	Wright Barker.....	Matheson.....	Sub-bituminous.....	77	1	832	25
Totals—Number	of Mines Operated, 2.....			57.74	27	3,039	.....

EL PASO COUNTY

Pikeview.....	Pikes Peak Cons. Fuel Co.....	Sub-bituminous.....	213.3	169	245,223	1,000
Keystone.....	Keystone Mining Co.....	Sub-bituminous.....	242	44	50,738	275
City No. 1.....	Colorado Springs Co.....	Sub-bituminous.....	245	71	58,880	400
Patterson (Old).....	W. D. Corley.....	Sub-bituminous.....	281	23	22,297	200
Danville.....	Danville Coal Co.....	Sub-bituminous.....	271	5	4,241	40
Altitude.....	Altitude Coal Co.....	Sub-bituminous.....	88	5	1,472	50
Cottonwood.....	Cottonwood Coal Co.....	Sub-bituminous.....	175	2	592	6
Franceville.....	W. D. Corley.....	Sub-bituminous.....	85	5	539	50
Golden Dawn.....	Golden Dawn Coal Co.....	Sub-bituminous.....	260	3	1,992	.....
Rush.....	Edgington Coal Co.....	Sub-bituminous.....	167	5	1,879	20
Ramah.....	Co-operative Fuel Co.....	Sub-bituminous.....	15	4	309	.....
Totals—Number.....	of Mines Operated, 11.....	.....	222.62	336	389,162	.....

FREMONT COUNTY

Rockvale.....	Colorado Fuel & Iron Co.....	Semi-bituminous.....	139.3	236	78,680	750
Fremont.....	Colorado Fuel & Iron Co.....	Semi-bituminous.....	209.7	141	74,070	600
Coal Creek.....	Colorado Fuel & Iron Co.....	Semi-bituminous.....	36.7	144	28,409	750
Nonac.....	Colorado Fuel & Iron Co.....	Semi-bituminous.....	204	27	23,458	150
Emerald.....	Colorado Fuel & Iron Co.....	Semi-bituminous.....	123	44	13,546	200
Chandler.....	Victor-American Fuel Co.....	Semi-bituminous.....	236.8	168	91,653	1,000
Radiant.....	Victor-American Fuel Co.....	Semi-bituminous.....	230.2	69	44,649	500
Brookside.....	Canon-Reliance Coal Co.....	Semi-bituminous.....	180.5	109	40,883	700
Royal Gorge.....	Vuzzetti & Maschetti.....	Semi-bituminous.....	281	15	21,383	75
Griffiths.....	Gibson Lumber & Fuel Co.....	Semi-bituminous.....	125	25	17,467	40
Bassick.....	Griffiths Coal Co.....	Semi-bituminous.....	195	11	9,132	40
Williamsburg Slope.....	Canon Co-operative Coal Ass'n.....	Semi-bituminous.....	99	6	896	10
Walden.....	Williamsburg Coal Co.....	Semi-bituminous.....	259	6	5,059	25
Double Dick.....	Mountain View Coal Co.....	Semi-bituminous.....	224	9	6,925	.....
Bluff Springs.....	Double Dick Coal Co.....	Semi-bituminous.....	230	12	8,670	30
Brewster.....	McLean Coal Co.....	Semi-bituminous.....	236	10	6,236	40
Jack O'Lantern.....	Brewster Independent Coal Co.....	Semi-bituminous.....	289	10	4,573	20
Willie.....	Petry & Son.....	Semi-bituminous.....	181	5	1,918	10
Smith-Tanner.....	John Fontecchio.....	Semi-bituminous.....	221	2	1,496	5
Florence-Canon.....	Smith-Tanner Coal M. Co.....	Semi-bituminous.....	160	1	841	15
Totals—Number.....	Florence-Canon Coal Co.....	Semi-bituminous.....	256	10	3,845	40
.....	of Mines Operated, 21.....	.....	172.93	1,060	482,389	.....

TABLE B—Continued

GARFIELD 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
Carbonera.....	Gilson Asphaltum Co.	Mack.....	Bituminous.....	238.6	8	9,960	60
South-Canon.....	South Canon Mine Leasing Co.	Glenwood Spring	Bituminous.....	230	6	5,348	75
Harvey Gap.....	Bracken & Cozza	New Castle.....	Bituminous.....	205	3	1,467	6
Estes.....	Estes Bros.	Rifle.....	Bituminous.....	83	2	1,424	15
Rauman.....	Rauman Coal Co.	Rifle.....	Bituminous.....	265	3	1,316	8
McLearn.....	Rifle Coal Co.	Rifle.....	Bituminous.....	114	3	582	4
Earnest.....	Pischel Bros.	Glenwood Spring	Bituminous.....	60	2	325	6
Ohkraut.....	Ohkraut Mining Co.	Glenwood Spring	Bituminous.....	102	1	275	4
Totals—Number	of Mines Operated, 8			193.89	28	20,725	-----

GUNNISON COUNTY

Somerset.....	Utah Fuel Co.	Somerset.....	Bituminous.....	245.5	200	261,643	1,800
Crested Butte.....	Colorado Fuel & Iron Co.	Crested Butte.....	Bituminous.....	229.7	105	74,851	600
Elk Mountain.....	Colorado Fuel & Iron Co.	Crested Butte.....	Semi-anthracite.....	194.1	37	15,810	300
Horace.....	Ross Coal Co.	Crested Butte.....	Anthracite.....	112	36	9,033	350
Smith-Anthracite.....	Crested Butte Anthracite M. Co.	Crested Butte.....	Anthracite.....	118.5	22	8,222	350
Bulkeley No. 2.....	Crested Butte Coal Co.	Crested Butte.....	Bituminous.....	153	25	15,544	300
Alpine.....	Rocky Mountain Fuel Co.	Baldwin.....	Semi-bituminous.....	150.6	45	26,082	350
Baldwin-Star.....	Baldwin Fuel Co.	Baldwin.....	Semi-bituminous.....	159	6	7,462	100
Ohio Creek.....	Ohio Creek Coal M. Co.	Gunnison.....	Semi-bituminous.....	137	30	21,012	200
Big Johnny.....	Big Johnny Coal Co.	Gunnison.....	Semi-bituminous.....	64	2	253	-----
Totals—Number	of Mines Operated, 10			202.42	508	439,912	-----

HUERFANO COUNTY

Robinson-Walsen.....	Colorado Fuel & Iron Co.....	Walsen.....	Bituminous.....	284.7	556	429,666	2,350
Ideal.....	Colorado Fuel & Iron Co.....	Ideal.....	Bituminous.....	259.4	235	208,246	1,000
Cameron.....	Colorado Fuel & Iron Co.....	Farr.....	Bituminous.....	262.4	189	189,245	900
Lester.....	Colorado Fuel & Iron Co.....	Lester.....	Bituminous.....	273.8	221	183,694	900
Pictou.....	Colorado Fuel & Iron Co.....	Pictou.....	Bituminous.....	83.4	76	25,802	400
Kehler No. 1.....	Colorado Fuel & Iron Co.....	Tioga.....	Bituminous.....	84.2	26	5,972	150
Kehler No. 2.....	Colorado Fuel & Iron Co.....	Tioga.....	Bituminous.....	245.7	112	79,753	350
Jobal.....	Colorado Fuel & Iron Co.....	Pictou.....	Bituminous.....	187.1	28	18,989	375
Calumet (Turner).....	Calumet Fuel Co.....	Ledcarbon.....	Bituminous.....	262.5	152	200,223	900
Oakdale.....	Oakdale Coal Co.....	Oakview.....	Bituminous.....	264.1	162	147,254	800
Mutual.....	Mutual Coal Co.....	Walsenburg.....	Bituminous.....	220.8	135	131,126	800
Pryor.....	Union Coal & Coke Co.....	Pryor.....	Bituminous.....	212.5	85	72,588	500
Sunnyside.....	Sunnyside Coal M. Co.....	Strong.....	Bituminous.....	129.1	116	66,419	700
Ravenwood.....	Victor-American Fuel Co.....	Ravenwood.....	Bituminous.....	219.5	110	56,517	500
Mattland.....	McNally & Thompson.....	Mattland.....	Bituminous.....	192.2	66	44,933	400
Gordon.....	Gordon Coal Co.....	Camp Shumway.....	Bituminous.....	195	77	46,216	300
Brennan.....	Brennan Coal M. Co.....	Camp Shumway.....	Bituminous.....	133	73	35,571	350
Toltec.....	Aztec Coal M. Co.....	Toltec.....	Bituminous.....	151.8	66	33,133	350
Reliance.....	Canon-Reliance Coal Co.....	Ojo.....	Bituminous.....	170.1	59	22,294	300
Rugby.....	Rugby Collieries Co.....	Rugby.....	Bituminous.....	114	39	16,842	300
Hezron.....	Caddell & Son.....	Lester.....	Bituminous.....	207.8	10	15,857	60
Caddell.....	Black Canon Coal & Fuel Co.....	Walsenburg.....	Bituminous.....	158	31	13,041	150
Vesta.....	Vesta Mines, Inc.....	Camp Shumway.....	Bituminous.....	148.8	50	23,645	300
Leader.....	Futh & Stone.....	Rouse.....	Bituminous.....	229	20	10,490	50
Caprock.....	Fred J. Sweet.....	Walsenburg.....	Bituminous.....	194	13	5,948	50
Bunker Hill.....	Steve Mattivi & Son.....	Rapson.....	Bituminous.....	120	26	3,500	75
Cuchara Canon.....	Cuchara Canon Coal Co.....	Walsenburg.....	Bituminous.....	71	18	2,252	.....
Stella Mae.....	Stella Mae Coal Co.....	Lester.....	Bituminous.....	42	4	610	.....
Black Hills.....	Black Hills Coal Co.....	Tioga.....	Bituminous.....	60	3	500	10
Totals—Number.....	of Mines Operated, 29.....			227.89	2,758	2,091,826	.....

JACKSON COUNTY

Moore No. 1.....	North Park Coal Co.....	Coalmont.....	Sub-bituminous.....	224	50	57,501	400
Moore No. 2.....	North Park Coal Co.....	Coalmont.....	Sub-bituminous.....	100	14	3,507	50
Totals—Number.....	of Mines Operated, 2.....			196.88	64	61,308	.....

TABLE B—Continued

JEFFERSON 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
Leyden No. 3.....	Leyden Coal Co.....	Leyden.....	Sub-bituminous..	269	158	174,387	1,100
Sharon (Satanic).....	Colorado Collieries Co.....	Morrison.....	Sub-bituminous..	276	7	4,088	250
Christensen.....	Christensen Coal Co.....	Littleton.....	Sub-bituminous..	171.5	8	2,072	100
Totals—Number	of Mines Operated, 3	.....	.....	264.77	173	180,547	.....

LA PLATA COUNTY

Perins Peak.....	Calumet Fuel Co.....	Durango.....	Bituminous.....	100.7	69	27,100	300
San Juan.....	American Smelting & Ref. Co.....	Durango.....	Bituminous.....	209	34	24,143	150
Sunshine.....	Sunshine Coal Co.....	Durango.....	Bituminous.....	131	9	10,097	95
Triangle.....	Triangle Coal Co.....	Durango.....	Bituminous.....	192	6	4,618	75
Morning Star.....	Baudino & Co.....	Durango.....	Bituminous.....	218	5	3,690	22
O. K.....	O. K. Coal Co.....	Durango.....	Bituminous.....	246	6	4,868	40
City.....	J. H. Rasmussen.....	Durango.....	Bituminous.....	251	3	1,154	5
Minnie.....	Minnie Coal Co.....	Durango.....	Bituminous.....	168	3	931	8
Champion.....	Champion Coal M. Co.....	Durango.....	Bituminous.....	46	7	531	50
Gates.....	Gates Coal & Lumber Co.....	Durango.....	Bituminous.....	40	4	545	15
Hesperus No. 1.....	Hesperus Fuel Co.....	Hesperus.....	Semi-bituminous..	38	46	5,259	200
Hesperus No. 2.....	Bay Coal Co.....	Hesperus.....	Semi-bituminous..	40	6	648	12
Peacock.....	F. B. Henderson.....	Hesperus.....	Semi-bituminous..	100	3	385	10
Florida Grange.....	Florida Grange.....	Griffith.....	Semi-bituminous..	120	2	326	10
Totals—Number	of Mines Operated, 14	114.37	203	84,325

LAS ANIMAS COUNTY

STATE INSPECTOR OF COAL MINES

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Morley.....	Colorado Fuel & Iron Co.....	Morley.....	Bituminous.....	283.1	308	310,147	1,100
Frederick.....	Colorado Fuel & Iron Co.....	Valdez.....	Bituminous.....	246.3	381	300,680	1,212
Sopris.....	Colorado Fuel & Iron Co.....	Sopris.....	Bituminous.....	272.5	404	262,094	1,200
Tabasco.....	Colorado Fuel & Iron Co.....	Tabasco.....	Bituminous.....	254.7	255	238,523	900
Primero.....	Colorado Fuel & Iron Co.....	Primero.....	Bituminous.....	225.8	300	217,529	1,200
Toller.....	Colorado Fuel & Iron Co.....	Tollerburg.....	Bituminous.....	224.5	233	149,512	750
Berwind.....	Colorado Fuel & Iron Co.....	Berwind.....	Bituminous.....	197.2	215	140,931	800
Engle.....	Colorado Fuel & Iron Co.....	Engleburg.....	Bituminous.....	158	31	17,150	400
Delagua.....	Victor-American Fuel Co.....	Delagua.....	Bituminous.....	248.4	415	426,904	2,400
Cass.....	Victor-American Fuel Co.....	Delagua.....	Bituminous.....	203.7	154	122,933	1,000
Hastings No. 5.....	Victor-American Fuel Co.....	Hastings.....	Bituminous.....	108.6	98	27,894	500
Boncarbo.....	American Smelting & Ref. Co.....	Cokedale.....	Bituminous.....	263.2	199	217,106	1,200
Royal.....	Royal Fuel Co.....	Aguliar.....	Bituminous.....	218.6	219	166,679	1,100
Brodhead No. 9.....	Temple Fuel Co.....	Brodhead.....	Bituminous.....	222	155	102,055	700
Brodhead No. 10.....	Temple Fuel Co.....	Brodhead.....	Bituminous.....	81	62	10,788	200
Ludlow.....	Huerfano Coal Co.....	Ludlow.....	Bituminous.....	185.9	120	81,386	600
Forbes.....	Rocky Mountain Fuel Co.....	Forbes.....	Bituminous.....	155.5	93	65,761	400
La Belle.....	Rocky Mountain Fuel Co.....	Sopris.....	Bituminous.....	214.8	55	37,292	185
Piedmont.....	Rocky Mountain Fuel Co.....	Sopris.....	Bituminous.....	90.5	10	6,508	70
Southwestern.....	Rocky Mountain Fuel Co.....	Aguliar.....	Bituminous.....	37	49	5,741	300
Bear Canon.....	Bear Canon Coal Co.....	Valloroso.....	Bituminous.....	235.8	108	69,588	600
Thor.....	National Fuel Co.....	Bowen.....	Bituminous.....	175.7	90	63,207	500
Empire.....	Empire Coal M. Co.....	Aguliar.....	Bituminous.....	191.8	79	52,763	425
Dix.....	Dick Coal Co.....	Boncarbo.....	Bituminous.....	245	56	41,982	400
Greenville.....	Cedar Hill Coal & Coke Co.....	Ludlow.....	Bituminous.....	240	33	27,170	200
Black Diamond.....	Cedar Hill Coal & Coke Co.....	Rapson.....	Bituminous.....	113	16	4,800	100
Santa Fe.....	Santa Fe Coal Co.....	Trinidad.....	Bituminous.....	99.4	92	27,167	400
Jeffreyes.....	Jeffreyes Fuel Co.....	Trinidad.....	Bituminous.....	241	22	21,474	300
Jewel.....	Jewell Collieries Co.....	Aguliar.....	Bituminous.....	168.1	40	20,956	250
Macoye.....	Eureka Coal M. Co.....	Boncarbo.....	Bituminous.....	111.3	66	20,456	350
Three Pines.....	Three Pines Coal Co.....	Valloroso.....	Bituminous.....	219.4	28	19,178	150
Stanley.....	Stanley Coal Co.....	Boncarbo.....	Bituminous.....	212.5	27	19,039	150
Rapson No. 1.....	Rapson Coal M. Co.....	Rapson.....	Bituminous.....	133.3	41	16,082	300
Prairie Canon.....	Prairie Canon Coal Co.....	Valloroso.....	Bituminous.....	122.5	41	14,596	100
Primrose.....	Black Hawk Coal Co.....	Rapson.....	Bituminous.....	164	30	12,449	100

TABLE B—Continued
LAS ANIMAS 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
Liberty.....	Liberty Coal Co.....	Forbes.....	Bituminous.....	174	12	4,211	.....
Baldy Mountain.....	Trinidad Coal Co.....	Trinidad.....	Bituminous.....	256	5	3,974	40
Ferrell.....	Trinidad Coal Co.....	Trinidad.....	Bituminous.....	150	3	374	5
Pritchard.....	Wilton Coal Co.....	Trinidad.....	Bituminous.....	229	3	2,424	15
Mallott (Shamrock).....	McGovern Coal Co.....	Rugby.....	Bituminous.....	74	8	2,350	.....
Baldy.....	Wm. Irons & Son.....	Trinidad.....	Bituminous.....	175	3	4,512	20
Beshoar.....	Joerger Fuel Co.....	Trinidad.....	Bituminous.....	255	2	2,008	.....
Pickford.....	Boaglio Coal Co.....	Trinidad.....	Bituminous.....	195	4	1,947	8
Pine.....	Pine Fuel Co.....	Aguilar.....	Bituminous.....	229	4	1,410	10
Williams.....	Miners Coal & Coke Co.....	Trinidad.....	Bituminous.....	41	9	1,215	50
Young.....	Young & Caddell.....	Rapson.....	Bituminous.....	60	6	1,242	40
Fairview.....	Fairview Coal Co.....	Trinidad.....	Bituminous.....	200	2	1,200	5
Star (Thomas).....	Chas. H. Rankin.....	Rapson.....	Bituminous.....	90	8	1,000	40
Fishers Peak.....	R. Marsh.....	Trinidad.....	Bituminous.....	166	2	682	5
Valley.....	Star Coal Co.....	Sopris.....	Bituminous.....	82	9	1,016	150
McIntosh.....	McIntosh & Pritchard.....	Trinidad.....	Bituminous.....	109	4	644	15
Leone.....	L. Leone.....	Trinidad.....	Bituminous.....	122	2	445	10
Corra.....	John Corra.....	Sopris.....	Bituminous.....	90	1	275	20
Verdun.....	Dennis & Malone.....	Trinidad.....	Bituminous.....	41	1	202	2
Sarcillo.....	T. W. Wyatt.....	Segundo.....	Bituminous.....	20	4	140	.....
Prospect.....	Ludwig Katala.....	Trinidad.....	Bituminous.....	30	1	120	3
Totals—Number	of Mines Operated, 56.....	.....	.....	218.21	4,628	3,369,891	.....

MESA COUNTY

Cameo.....	Grand Junction M. & F. Co.	Cameo.....	Semi-bituminous.	187	91	78,158	600
Palisade.....	Palisade Coal & Supply Co.	Palisade.....	Semi-bituminous.	244	42	21,740	250
Garfield.....	Garfield Coal M. & T. Co.	Palisade.....	Semi-bituminous.	231	36	20,012	200
Midwest.....	Midwest Coal Co.	Palisade.....	Semi-bituminous.	142	25	8,917	200
Book Cliff.....	Book Cliff Coal Co.	Grand Junction.....	Semi-bituminous.	214	12	8,813	100
Riverside.....	C. W. Holland	Palisade.....	Semi-bituminous.	283	3	3,062	15
Stokes.....	W. D. Stokes	Palisade.....	Semi-bituminous.	154	10	3,724	80
Stove Canon (Prospect)	McLendon & Kennedy	Fruita.....	Semi-bituminous.	256	3	1,871	30
Winger.....	Mesa Coal Co.	Palisade.....	Semi-bituminous.	170	4	1,952	30
Thomas.....	Thomas Coal Co.	Grand Junction.....	Semi-bituminous.	176	4	1,869	30
Anchor No. 2.....	Anchor Coal Co.	Fruita.....	Semi-bituminous.	250	2	1,471	.....
Farmer-Mutual.....	Farmer-Mutual Coal Co.	Grand Junction.....	Semi-bituminous.	119.1	4	1,125	20
Black Diamond.....	Black Diamond Coal Co.	Grand Junction.....	Semi-bituminous.	118	2	428	.....
Hunter.....	J. B. Hunter	Fruita.....	Semi-bituminous.	47	2	326	10
Nearing.....	Liberty Coal & Merc. Co.	Fruita.....	Semi-bituminous.	28	3	233	.....
Midway.....	Midway Mining Co.	Grand Junction.....	Semi-bituminous.	45	3	320	8
Hidden Treasure.....	Hidden Treasure M. Co.	Grand Junction.....	Semi-bituminous.	77	2	302	.....
McGinley.....	Wm. McGinley	Grand Junction.....	Semi-bituminous.	60	3	182	.....
Bear Cat.....	Dan G. Lohman	Grand Junction.....	Semi-bituminous.	75	2	147	.....
Totals—Number	of Mines Operated, 19			190.71	253	154,652	.....

MOFFAT COUNTY

Phillip Nos. 1 & 2.....	Producers Coal Co.	Craig.....	Bituminous	206	10	2,621	100
Walker.....	Walker Land & C. Co.	Craig.....	Bituminous	200	3	2,400	20
Mt. Evans.....	Mt. Evans Fuel Co.	Craig.....	Bituminous	125	6	957	20
Colloim.....	Axial Basin Dev. Co.	Axial.....	Bituminous	103	1	851	20
Hart.....	Hart Coal Co.	Craig.....	Bituminous	115	2	356	.....
Totals—Number	of Mines Operated, 5			170.13	22	7,155	.....

MONTEZUMA COUNTY

School Sec. Lease.....	French & Fielding	Mancos.....	Sub-bituminous.	247	6	2,217	12
Kelly.....	Cortez Coal Co.	Cortez.....	Sub-bituminous.	221	3	1,995	20
Freeman.....	Pinos Altos Coal Co.	Mancos.....	Sub-bituminous.	184	2	463	3
Indian School.....	Mancos Mesa Coal Co.	Mancos.....	Sub-bituminous.	56	3	208	2
	Toawac Reservation	Toawac.....	Sub-bituminous.	51	4	524	.....
Totals—Number	of Mines Operated, 5			160.27	18	4,507	.....

TABLE B—Continued
MONTROSE 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
Cloverdale.....	Naturita Stores Co.....	Naturita.....	Sub-bituminous...	204	2	657	.....
Missouri.....	J. S. Chew.....	Nucla.....	Sub-bituminous...	99	2	426	.....
Liberty Bell.....	John H. Drott.....	Naturita.....	Sub-bituminous...	107	2	259	4
Chatfield.....	Ralph E. Chatfield.....	Nucla.....	Sub-bituminous...	100	1	175	6
Totals—Number	of Mines Operated, 4			131.42	7	1,517	.....

OURAY COUNTY

Economy.....	John Bell & Co.....	Ridgeway.....	Sub-bituminous...	120	1	500	5
Totals—Number	of Mines Operated, 1			120	1	500	.....

PITKIN COUNTY

Marion.....	J. R. Marchetti.....	Carbondale.....	Bituminous.....	230	2	2,589	.....
Totals—Number	of Mines Operated, 1			230	2	2,589	.....

RIO BLANCO COUNTY

Black Diamond.....	Reynolds & Babcock.....	Meeker.....	Bituminous.....	260.9	2	1,813	50
Lion Canon.....	White River Lumber.....	Meeker.....	Bituminous.....	246	2	1,132	15
Fairfield.....	Rio Blanco Coal Co.....	Meeker.....	Bituminous.....	153	2	459	.....
McKee.....	G. C. Clark.....	Meeker.....	Bituminous.....	74.6	2	343	.....
Meeker No. 1.....	Meeker Coal M. & Dev. Co.....	Meeker.....	Bituminous.....	39	11	249	7
Douglas Creek.....	Jones & Trachter.....	Rangeley.....	Bituminous.....	90	1	131	10
Totals—Number	of Mines Operated, 6			99.40	20	4,127	.....

ROUTT COUNTY

Oak Hills No. 1	Moffat Coal Co.	Oak Creek	Bituminous	50.3	105	79,847	2,000
Oak Hills No. 2	Moffat Coal Co.	Oak Creek	Bituminous	34.6	92	49,210	2,000
Harris	Colorado & Utah Coal Co.	Oak Creek	Bituminous	52.8	175	102,292	2,400
Pinnacle	Victor-American Fuel Co.	Oak Creek	Bituminous	25.8	79	42,884	2,000
Wadge	Victor-American Fuel Co.	Mt. Harris	Bituminous	18.5	73	22,252	1,000
Hayden	Hayden Bros. Coal Corp.	Haybro	Bituminous	32.6	78	37,746	1,500
MacGregor	McNeil Coal Co.	MacGregor	Bituminous	26.7	69	33,387	1,200
Bear River	Bear River Coal Co.	Bear River	Bituminous	21.6	49	13,726	500
Wolf Creek	International Fuel Corp.	Mt. Harris	Bituminous	34.4	42	9,128	300
Rainbow	Wyoming & Utah Coal Co.	Milner	Bituminous	18.5	34	6,283	800
Yampa	Yampa Collieries Co.	Milner	Bituminous	24.1	24	5,568	300
Route-Pinnacle	Route-Pinnacle Coal Co.	Bear River	Bituminous	15.1	29	5,047	350
Postal	Postal Coal M. Co.	Oak Creek	Bituminous	130	7	3,265	100
Dry Creek	Hayden Valley Mutual Coal Co.	Hayden	Bituminous	267	6	2,646	30
Curtis	Colorado Fuel Co.	Milner	Bituminous	52.5	15	2,276	150
Butcher Knife	C. O. Rudisill	Milner	Bituminous	120	3	800	5
Twin Mesa	Twin Mesa Coal Co.	Hayden	Bituminous	50	4	539
Lorella	M. O. Dickerson	Hayden	Bituminous	72	1	366
Twenty-Mile	Chergo & Hancock	Oak Creek	Bituminous	120	1	350
McDowell	Hawkeye Coal Co.	Bear River	Bituminous	3	6	246
Tulbure	Solar Coal M. Co.	Milner	Bituminous	47	2	178	8
Totals—Number	of Mines Operated, 21			45.72	394	418,096	

WELD COUNTY

Columbine	Rocky Mountain Fuel Co.	Erie	Sub-bituminous	301	316	409,836	2,500
Frederick	Rocky Mountain Fuel Co.	Frederick	Sub-bituminous	133.7	73	73,995	1,000
Frederick	Rocky Mountain Fuel Co.	Frederick	Sub-bituminous	165.9	22	18,538	150
Purlan	National Fuel Co.	Dacono	Sub-bituminous	219.4	223	256,192	2,000
Baum	Consolidated Coal & Coke Co.	Dacono	Sub-bituminous	260	95	122,150	1,000
Clayton	Clayton Coal Co.	Erie	Sub-bituminous	210	89	115,898	1,600
Boulder Valley	Boulder Valley Coal Co.	Erie	Sub-bituminous	178.3	92	97,868	900
Evans	International Fuel Corp.	Frederick	Sub-bituminous	145.4	126	88,361	600
Sterling	Grand Junction Mining & Fuel Co.	Dacono	Sub-bituminous	130.7	89	83,016	1,000
Russell	W. E. Russell Coal Co.	Freestone	Sub-bituminous	228	81	72,960	500
Shamrock	Shamrock Coal Co.	Erie	Sub-bituminous	210	47	68,300	500
Monroe	United Collieries Co.	Erie	Sub-bituminous	208.5	33	40,253	250
Eureka	Bell Mining Co.	Frederick	Sub-bituminous	125	14	9,623	250
Witherbee	Fort Lupton Coal Co.	Fort Lupton	Sub-bituminous	246	15	8,188	75
White Ash	W. C. Bedlien	La Salle	Sub-bituminous	245	3	1,903	18
Hill	Keota Coal M. Co.	Briggsdale	Sub-bituminous	109	5	518	27
Totals—Number	of Mines Operated, 16			225.35	1,323	1,467,501	
Totals for the State—	of Mines Operated, 175			199.54	13,436	10,003,610	

TABLE C

PRODUCTION OF COUNTIES BY MONTHS—1922

Months	Adams	Archuleta	Boulder	Delta	Elbert	El Paso	Fremont
January	81,805	10,816	393	42,067	41,141
February	98,500	6,544	255	36,342	55,693
March	119,336	6,162	184	38,967	69,751
April	5,956	4,721	.....	20,500	3,689
May	20,497	3,494	.....	17,012	6,657
June	31,820	4,645	.....	19,909	15,586
July	33,937	8,413	.....	28,053	15,352
August	44,554	12,539	.....	36,021	19,351
September	76,376	12,602	.....	25,766	34,964
October	58,376	12,766	696	32,766	59,860
November	67,712	12,671	526	44,383	70,857
December	481	248	72,607	13,234	985	46,376	89,486
Totals.....	481	248	711,476	108,607	3,039	388,162	482,389

Months	Garfield	Gunnison	Huerfano	Jackson	Jefferson	La Plata
January	2,030	28,143	158,409	4,119	15,497	8,198
February	1,369	31,942	160,099	2,432	15,013	10,323
March	1,412	43,841	185,266	3,472	21,559	9,686
April	1,450	26,754	102,094	2,721	7,786	3,726
May	1,248	28,259	154,290	3,663	8,272	2,607
June	1,187	28,678	188,431	4,113	12,370	4,787
July	1,482	35,560	163,032	6,459	11,362	4,493
August	1,501	46,362	202,328	6,319	15,195	5,065
September	1,575	48,503	172,721	6,627	16,381	9,095
October	1,901	36,362	175,121	7,778	18,324	9,393
November	2,712	43,072	190,062	7,362	18,302	6,975
December	2,858	42,436	239,973	6,243	20,486	9,977
Totals.....	20,725	439,912	2,091,826	61,308	180,547	84,325

Months	Las Animas	Mesa	Moffat	Montezuma	Montrose	Ouray
January	210,472	11,330	177	620	129	.....
February	201,538	8,969	153	791	101	.....
March	268,665	11,571	154	455	272	.....
April	171,635	2,356	183	290	160	.....
May	272,515	2,439	187	160	75	.....
June	324,692	6,507	250	142	136	.....
July	332,654	14,250	180	166	13	.....
August	369,806	17,915	314	230	10	.....
September	294,930	19,449	378	240	99	.....
October	290,014	19,329	822	457	118	.....
November	292,567	19,984	1,021	490	159	.....
December	340,403	20,553	3,366	466	245	500
Totals.....	3,369,891	154,652	7,185	4,507	1,517	500

Months	Pitkin	Rio Blanco	Routt	Weld	Grand Total
January	334	796	50,436	143,230	810,142
February	244	468	50,231	105,694	786,701
March	14	290	69,907	133,195	984,159
April	18	174	1,267	46,194	401,674
May	52	155	893	73,646	596,121
June	112	94	1,164	95,888	740,511
July	221	78	1,114	99,770	759,589
August	199	73	24,707	150,065	952,556
September	256	207	40,391	129,407	889,967
October	386	250	59,469	139,220	923,712
November	414	390	55,706	167,008	1,002,701
December	339	1,152	59,811	184,184	1,155,777
Totals.....	2,589	4,127	418,096	1,467,501	10,003,610

TABLE D

SHOWING INCREASE AND DECREASE BY COUNTIES, 1921-1922

Counties	Tons Produced 1921	Tons Produced 1922	Increase	Decrease
Adams	110	481	371	
Archuleta	714	248		466
Boulder	850,950	711,476		139,474
Delta	94,151	108,607	14,456	
Elbert	2,313	3,039	726	
El Paso	292,705	388,162	95,457	
Fremont	593,463	482,389		111,074
Garfield	18,117	20,725	2,608	
Gunnison	484,614	439,912		44,702
Huerfano	1,782,520	2,091,826	309,306	
Jackson	42,784	61,308	18,524	
Jefferson	134,582	180,547	45,965	
La Plata	102,627	84,325		18,302
Las Animas	2,716,405	3,369,891	653,486	
Mesa	114,077	154,652	40,575	
Moffat	2,847	7,185	4,338	
Montezuma	4,069	4,507	438	
Montrose	2,357	1,517		840
Ouray	578	500		78
Pitkin	1,648	2,589	941	
Rio Blanco	4,224	4,127		97
Routt	876,638	418,096		458,542
Weld	1,019,454	1,467,501	448,047	
Totals.....	9,141,947	10,003,610		

Increase, 1922..... 861,663

TABLE E

COKE PRODUCED IN 1922 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....	157	71,734	La Plata	22	8,116
Colorado Fuel and Iron Co.....	220	418,934	Las Animas....	235	117,874
			Pueblo	120	364,678
Totals.....	377	490,668		377	490,668

REMARKS:

Average number of days worked at the coke ovens..... 337.7
 Average number of men employed at the coke ovens..... 173.0
 Number of tons of coal made into coke..... 750,998

TABLE F
SHOWING BY COUNTIES THE COAL PRODUCTION OF 1922 IN PREPARED SIZES

Counties	Mine Run	Lump	Nut	Pea	Slack	Total
Adams.....	481	.....	.....	.....	.....	481
Archuleta.....	248	.....	.....	.....	.....	248
Boulder.....	236,661	223,256	20,115	.....	231,444	711,476
Delta.....	19,846	47,251	17,565	.....	23,945	108,607
Elbert.....	3,039	.....	.....	.....	.....	3,039
El Paso.....	159,885	106,590	4,544	.....	117,143	388,162
Fremont.....	67,124	219,878	70,985	7,441	116,961	482,389
Garfield.....	13,777	4,445	1,769	.....	734	20,725
Gunnison.....	*330,247	84,535	2,455	.....	22,675	439,912
Huerfano.....	448,444	817,556	243,877	42,009	539,940	2,091,826
Jackson.....	14,114	19,816	12,254	.....	15,124	61,308
Jefferson.....	30,061	56,120	12,706	.....	31,660	180,547
La Plata.....	66,266	7,459	3,611	859	6,130	84,325
Las Animas.....	1,608,786	589,858	130,079	8,387	1,032,781	3,369,891
Mesa.....	70,127	41,937	15,517	1,593	25,478	154,652
Moffat.....	5,030	1,190	581	.....	384	7,185
Montezuma.....	3,025	1,215	126	.....	141	4,507
Montrose.....	836	545	15	.....	121	1,517
Ouray.....	500	.....	.....	.....	.....	500
Pitkin.....	2,589	.....	.....	.....	.....	2,589
Rio Blanco.....	1,139	2,457	499	.....	32	4,127
Routt.....	123,265	168,162	48,538	12,826	65,305	418,096
Weld.....	521,737	460,312	79,596	.....	405,856	1,467,501
Totals.....	3,727,227	2,852,582	664,832	73,115	2,685,854	10,003,619

*17,255 tons Anthracite and 15,810 tons Semi-Anthracite included.

NOTE.—In the Slack, some mines include Pea and others Nut and Pea coal. The Egg coal is included in the Nut and the Grate coal is included in the Slack. (The Egg and Grate coal reported only from Routt county.)

TABLE G

TABULATION SHOWING THE NUMBER OF MEN OF THE DIFFERENT NATIONALITIES EMPLOYED IN AND ABOUT THE COAL MINES OF COLORADO

(Poll Taken In January, 1923.)

Nationality	No. of Men	Nationality	No. of Men
Americans	4,702	Montenegrins	4
English	176	Bulgarians	225
Welsh	152	Greeks	470
Scotch	181	Russians	66
Irish	44	Poles	109
Negroes	384	Bohemians	34
Italians	2,147	Swedes	42
French	80	Danes	6
Belgians	13	Finlanders	79
Spanish	227	Japanese	29
Mexicans	3,218	Rumanians	15
Slavonians	459	Syrians	3
Croatians	53	Lithuanians	12
Austrians	859	Hollander	1
Germans	107	Portuguese	1
Hungarians	89		
Servians	64	Total	14,051

COAL PRODUCTION OF COLORADO FROM 1873 TO 1922, INCLUSIVE

Year	Tons	Year	Tons
1873	69,977	1898	4,174,037
1874	87,372	1899	4,826,939
1875	98,838	1900	5,495,734
1876	117,666	1901	6,021,405
1877	160,000	1902	7,522,923
1878	200,630	1903	7,775,302
1879	322,732	1904	6,776,551
1880	375,000	1905	8,989,631
1881	706,744	1906	10,308,421
1882	1,161,479	1907	10,965,640
1883	1,220,593	1908	9,773,007
1884	1,130,024	1909	10,772,490
1885	1,398,796	1910	12,104,887
1886	1,436,211	1911	10,197,595
1887	1,791,735	1912	11,016,948
1888	2,185,477	1913	9,268,939
1889	2,400,629	1914	8,201,423
1890	3,075,781	1915	8,715,397
1891	3,512,632	1916	10,522,185
1892	3,771,234	1917	12,515,305
1893	3,947,056	1918	12,658,055
1894	3,021,028	1919	10,406,543
1895	3,339,495	1920	12,514,693
1896	3,371,633	1921	9,141,947
1897	3,565,660	1922	10,003,610

REPORT ON SOPRIS NO. 2 MINE EXPLOSION

April 28, 1922.

Mr. James Dalrymple,
State Inspector of Coal Mines,
Capitol Building,
Denver, Colo.

Dear Sir:

The following is my report concerning the explosion at Sopris No. 2 mine, which occurred on the afternoon of March 24th, 1922.

The mine is situated four miles west of Trinidad, Las Animas county, Colorado, on the Colorado & Southern Railroad, and is operated by the Colorado Fuel & Iron Co. The mine is opened by two parallel slopes, course East of South, 700 feet long. The slope dips 15%, the manway 20%, from this point the mine is practically level.

The mine is ventilated by a steam exhaust, reversible fan, 6x12 feet, double port of entry, steel type, made by the Colorado Fuel & Iron Company and was installed 50 feet, at right angles, from air-shaft. The volume of air entering the mine varied from 80,000 to 90,000 cubic feet per minute under three-inch water gauge and was conducted into the different districts by the split system, there being six splits.

The air upon entering the mine is pre-heated by radiators. Steam is then thrown into it for the purpose of furnishing all the moisture it will carry. The relative humidity readings taken by Deputy State Coal Mine Inspector, semi-annually, during summer and winter months varies but very little, if any, and run from 90 to 100. In addition to this, haulage roads were sprinkled frequently, part by hose from pipe line and part by water car.

Haulage system was by rope, electric motors, and mules. The voltage for electric motors was 550 D.C., and for electric machines and pumps, 440 A.C. Haulage motors and electric pumps were on the intake air. Electric head lamps were used exclusively, except mine officials.

Superintendent, mine foreman, assistant mine foreman, fire bosses, and shot firers use safety lamps for detection of explosive gas. All shots were fired at night by electric hand batteries, only permissible powder being used.

The mining of coal was done by hand on the east side of mine. Main slopes and west side of mine by electric machines.

At 4 o'clock in the afternoon of March 24th, 1922, I was notified by telephone through the office of the Colorado Fuel & Iron Co. that Sopris Mine No. 2 had exploded and that from 75 to 80 men were entombed, but by checking out the men it was found that all men were out but 17, who lost their lives. I immediately went to the mine and upon my arrival there found that the fan was still intact and in operation. The explosion doors to fan were blown out, thus disconnecting the fan from the mine until temporary repairs were made, when the ventilation was partly restored in the mine.

On entering the mine I found the Superintendent, Mine Foreman, Fire Bosses, and several others, building temporary stoppings along the main haulage road restoring the ventilation as rapidly as possible. The rebuilding of temporary stoppings was continued until 3:30 a. m. the morning of the 25th and progressed to within 500 feet of slope faces, when the shift which had continuously worked from the time of the explosion was withdrawn until that district could be cleared of gases. This shift was relieved by another shift, who after several hours found the bodies of the slope men.

The east side of the mine was explored by Mr. McAllister, C. F. & I. Mine Inspector, fire bosses, two others and myself, and we found that the point of ignition was not in the east side of the mine. The slopes and west side of the mine were explored by D. M. Harrington, U. S. Bureau of Mines, Robert McAllister, Company Inspector, State Inspector of Coal Mines, three Deputy Inspectors, and mine officials, who found that all permanent stoppings had been destroyed between the main intake and return airway, from the foot of 700-foot slope to face of main slopes, except three, which were left intact. All over-casts, under-casts, and doors were destroyed except one over-cast, which had been lately constructed on new airway, east side of mine.

There were four electric Sullivan latest type C. E. 7, gas proof machines carrying U. S. Bureau of Mines permissible plates. Three of them were in the 7th and 8th west entries. These machines ordinarily started cutting about 3:00 p. m. and quit about 11:00 p. m. Machine No. 1 was found in 8th west back entry still on its truck. Machine No. 2 was found in room No. 3 off room No. 9, 14 cut-off, set up and ready to start, Machine No. 3 was found in room No. 49, 7th west entry. This machine apparently was in operation when the explosion occurred, but there were no signs of heat or violence within three or four hundred feet of this machine. The power apparently had been cut off by the men before leaving. Their bodies were found 800 feet from the machine. Machine No. 4 was employed in the main slopes, cutting here was done during the day. The machine was found on main slope, apparently it had been brought from the right back slope, as the feed cable was still there.

There are three places in the mine, either of which might have been the initial point. They are as follows: The 8th west right back entry, room No. 3 off room No. 9, 14 cut-off, and right hand back slope. All of these places generate explosive gas, especially the latter, and all of them are equally dependent on doors for ventilation. The leaving open of a door or doors at either place for 20 or 30 minutes would allow an accumulation of explosive gas. In the right back slope it would be greater than at either of the other two.

At the inquest it was brought out that there was no regular fire boss examining the places on the afternoon shift, as the regular night fire boss did not come on shift until 4:00 o'clock, which was two hours after the machine men had entered. Therefore, some places may have been cleaned up several hours before machine men entered to cut them, and in all probabilities a considerable body of gas was generated in the meantime.

The scouring on sides of main slope 7th west entry into room No. 1 and the condition of cars on main slope at 5th east parting, where parts of cars had been blown outward and inward, also coke deposits on inside and outside of timbers, indicate that double action had taken place. This evidence does not exist in other parts of the mine, where there was considerable room for expansion. Here there was very little sign of violence, but intense heat, timbers being charred deeply on all sides, with considerable deposits of coke all over them. The scouring on main slope and 7 west entry into room No. 1 indicate that last force came out of the 7th west entry and down main slope, destroying to some extent the scouring made by the previous force traveling in the opposite direction.

In conclusion, the catastrophe was an explosion of gas and dust, caused by an accumulation of gas through a door or doors being left open, and ignited by an electric arc, and that in all probability the right back slope was the initial point.

Respectfully submitted,

W. M. LAURIE,

Deputy State Inspector of Coal Mines.
District No. 1.

Explosion at the Sopris mine in which 17 lives were lost :

March 24—PETE ADAMO, American, machine helper, age 33 years, married, two children.

FRANCESCO AMETEIS, Italian, pick miner, age 23 years, single.

ANTONIO BERTETTO, Italian, pick miner, age 22 years, single.

GUISEPPE BONATO, American, pick miner, age 64 years, married, two children.

MIGUEL CAUDILLO, Mexican, machine loader, age 28 years, married, no children.

MAX COVI, Austrian, machine runner, age 44 years, married, four children.

PETE DELDOSSO, American, runner and machine miner, age 24 years, married, one child.

FELIX MAGLIA, Italian, pick miner, age 24 years, single.

JOE MARLO, American, runner and machine miner, age 33 years, married, one child.

PETE MUSIAL, Polish, pick miner, age 36 years, married, one child and three step-children.

RUDOLPH PEASHKA, American, pick miner, age 36 years, married, four children.

CHARLES ROMERO, American, machine runner, age 45 years, married, seven children.

ROBERT E. ROMERO, American, machine helper, age 18 years, single.

PETE L. SAVIO, American, runner and machine miner, age 25 years, married, one child.

ODILAN SERRANO, Mexican, machine miner, age 47 years, widower, two children.

FRANK VALENCHICH, Slav, machine runner, age 32 years, married, no children.

MATT VALENCHICH, Slav, machine runner, age 28 years, married, two children.

LIST OF FATAL ACCIDENTS WHICH OCCURRED IN THE
COAL MINES OF COLORADO DURING THE
YEAR 1922

- (1)—January 14—RUDOLF BLOCHTER, American, pick miner, experience 10 years, single, employed by the Colorado Fuel & Iron Company at the Walsen mine, Huerfano county, was killed by a fall of coal and rock. Deceased was working in a pillar which was squeezing slightly with a bone coal over top of coal. The mine foreman and the brother of deceased had examined the roof and considered it safe. However, it was penetrated by several small pots of bone coal next to the regular roof which were not visible until after the fall. The accident was unavoidable.
- (2)—January 30—FRANK VIDIO, Slav, pick miner, experience one year, age 26 years, married, no children, employed by Caddell and Taggart at the Cuchara Canon mine, Huerfano county, was killed by a fall of rock. Deceased was working in a room when without warning a pot-shaped rock fell on him, causing instant death. The accident was unforeseen and therefore unavoidable.
- (3)—January 30—ROBERT ROMINES, American, pick miner, experience 15 years, age 49 years, single, employed by the Routt-Pinnacle Coal Company at the Routt-Pinnacle mine, Routt county, was killed by a fall of pillar coal. The coal was shot off the solid a day or two before the accident. Some shots had been fired which crushed the coal but left it standing. Deceased was loading a car when some of the loose coal fell on him, killing him instantly. The place was well timbered, but the accident could have been avoided had deceased pulled down the loose coal before starting to work near it.
- (4)—January 31—LOUIS UBERTI, Italian, pick miner, experience 7 years, age 27 years, single, employed by the Oakdale Coal Company at the Oakdale mine, Huerfano county, was killed by a fall of rock. A drawslate of 2½ feet thick on top of coal, and which could not be held up with timbers, had been pulled down square with face of coal; an invisible slip was exposed in the rock above. While deceased was working underneath mining coal it came down without any warning, killing him instantly. The accident was unforeseen and therefore cannot be charged to any one.
- (5)—February 9—RAYMOND HUGHES, American, rope rider, experience three years, age 19 years, single, employed by the Colorado Fuel & Iron Company at the Crested Butte mine, Gunnison county, came to his death by a collision of two trips. The mine is operated by two hoisting engines situ-

ated at the mouth of the mine, one hoists loaded cars to a parting about 250 feet inside the mine, from where the other takes it to the tippie. At the parting the ropes pulling the trips cross each other and if a trip is standing there it has to be uncoupled from the rope before the trip can pass. In this instance, the rope rider of the trip on the parting neglected to detach his trip from the rope and consequently when Hughes' trip came along and not seeing in time that the road was not clear, it was too late to jump, the trips collided and he was thrown between cars and crushed so severely that he died a few hours later. The accident was caused by a co-worker's carelessness.

- (6)—February 11—JOHN HOGAN, Colored, pick miner, experience 20 years, age 53 years, widower, one child, employed by the Moffat Coal Company at the Oak Hills mine, Routt county, was killed by a fall of coal. Deceased was working on a pillar with a bar prying some coal down from a standing shot when it suddenly gave way and struck him before he could make his escape. The room was in a safe condition, the roof solid and the place well timbered. The accident was unforeseen and therefore unavoidable.
- (7)—February 18—J. H. KEITH, American, driver, experience seven years, age 29 years, married, no children, employed by the Canon Reliance Coal Company at the Canon mine, Fremont county, came to his death under a loaded car. There was no eye-witness to the accident and it is believed that the mule he drove, being of a nervous disposition and inclined to leap forward when unexpectedly touched, was flecked by a small rock falling from the roof and threw deceased from the front end of the car, which ran over him killing him instantly. The accident was unforeseen and no one is held responsible for it.
- (8)—February 23—ANTONE SANKEY, Italian, pick miner, experience 9 years, age 40 years, married, two children, employed by the Colorado Fuel & Iron Company at the Sopris mine, Las Animas county, was killed by a fall of rock. Deceased and his partner were splitting a pillar when a slip running across the place was exposed, releasing the rock fall. The accident was a misadventure due to the inherent danger of the work.
- (9)—February 24—CASIMERO RIVERA, American, tippie laborer, experience none, age 50 years, married, no children, employed by the Colorado Fuel & Iron Company at the Sopris mine, Las Animas county, came to his death by being crushed under a loaded mine car. Deceased was driving the car to the tippie when he either fell off the car while it was moving, or slipped under it while he was braking it. There was no eye-witness to the accident and it is classed as unforeseen.

- (10)—March 1—MATT STARK, Croatian, machine miner, experience three years, age 32 years, married, one child, employed by the American Smelting & Refining Company at Boncarbo mine, Las Animas county, was killed by a fall of rock. Deceased and his partner were loading coal in an entry, when a large pot rock fell from the roof. Upon examination it was disclosed that the edge of the rock had been resting on the face of the coal which was being mined and was thus released. The accident was unforeseen and therefore was not guarded against.
- (11)—March 1—DONALD A. YOUNG, American, electrician, experience 18 years, age 35 years, single, employed by the Oakdale Coal Company at the Oakdale mine, Huerfano County, came to his death by electrocution. Deceased was knocking icicles off the eaves of the power house with a steel nail bar about three feet long with a hook at the end of the bar which was caught on a wire when the body was discovered. No one was present when the accident occurred and it is believed that he either overlooked the live wire which extends from the switchboard inside of the power house under the eaves of the building to a tower close by, or else he lost his footing, throwing bar over the live wire, causing a shock which killed him. Accident was due to carelessness of deceased in using a steel bar so close to electric wires.
- (12)—March 4—ALBERT BERGEN, Mexican, pick miner, experience two and one-half years, age 23 years, single, employed by the Colorado Fuel and Iron Company at the Morley mine, Las Animas county, was crushed to death between a car and roof. According to evidence, the rope runner had backed the rope with three empty cars into the room of deceased asking him to uncouple one of the cars for his use. Shortly after, he notified the rope runner that he had his car and the latter gave the signal to the engineer to hoist. However, when the cars were hoisted, it was discovered that the car was not uncoupled and deceased was found with his head caught between the edge of one of the cars and the roof. It is a dangerous practice to allow the miners to uncouple cars and should be discontinued. Had the rope rider uncoupled the car as it was his duty to do, the accident would have been avoided.
- (13)—March 8—TONY ZEHAR, Russian, machine miner, experience four years, age 47 years, married, two children, employed by the Colorado Fuel and Iron Company at the Robinson mine, Huerfano county, was killed by a fall of rock. Judging from the appearance of the place after the accident, a piece of rock back of him fell and killed him. The place was fairly well timbered and had been narrowed from 20 feet to 10 feet because of bad roof. Deceased was considered both a careful and experienced man. The accident was unforeseen and consequently unavoidable.

- (14)—March 16—PETE GOTZOFF, Bulgarian, pick miner, experience 9 years, age 43 years, married, three children, employed by the Victor-American Fuel Company at the Pinacle mine, Routt county, was injured by a fall of coal on the 15th and died on the following day. Deceased and his partner were taking coal off a pillar to load a car; while thus engaged, the roof gave a "bump" and caused a large piece of coal to fall on the former. Deceased's partner stated that they had tested the coal and considered it safe to work under, but the "bump" of the roof released the coal. This accident is charged to the inherent danger of the work and could not be foreseen.
- (15 to 31)—March 24—SEVENTEEN men lost their lives in a gas and dust explosion at the Sopris mine, operated by the Colorado Fuel and Iron Company, in Las Animas county. See Report on page 54.
- (32)—March 24—PETROLINO VIGIL, Mexican, pick miner, experience 20 years, age 45 years, single, employed by the Victor-American Fuel Company at the Cass mine, Las Animas county, was killed by a fall of rock. Deceased was working in a pillar entry where a drawslate of ten inches in thickness overlies the coal, a piece of which was loose. While deceased was in the act of taking a skip off the pillar, the rock fell on him killing him instantly. The accident was unavoidable.
- (33)—March 28—GEORGE LEDWICK, Austrian, pick miner, experience 18 years, age 43 years, married, no children, employed by the Leyden Coal Company at the Leyden No. 3 mine, Jefferson county, was killed by a fall of coal. This accident is attributed to negligence of deceased in not testing the roof before starting to work. Had he ascertained the condition of the roof he would probably have set up enough props to have made the place safe, but he was in a hurry to load the coal.
- (34)—March 31—HUGH GRAHAM, Scotch, car coupler, experience 50 years, age 65 years, married, two children, (adults) employed by the Consolidated Coal & Coke Company at the Baum mine, Weld county, was injured by being caught between two cars on February 6th, and died on the above date. Deceased was in the run-a-round making up a motor trip of empty cars. While standing between two cars in the act of coupling them, an empty car came running down, bumping against the car he was coupling and was struck by the bumpers, causing such serious injuries that he died of the effects of same on the above date. Deceased stated that he did not hear the car coming and therefore was not able to get out of the way in time to escape the crash. Had his hearing not been defective, it is probable that the accident would have been avoided.

- (35)—April 10—BERNADO PAIZ, Mexican, machine miner, experience 9 years, age 40 years, married, six children, employed by the Colorado Fuel & Iron Company at the Sopris mine, Las Animas county, was killed by a fall of rock. The room in which the accident occurred had been undercut and shot the day previous to the accident. Early in the morning deceased and his partner were loading the coal out when a large rock gave way and fell, striking Paiz and killing him instantly. No timbers had been set up when the coal was removed. The assistant mine foreman stated that he had visited the place shortly before the accident and found it in good condition, although the roof was somewhat bad. He advised that props be set up. The accident was unforeseen and no blame can be placed.
- (36)—May 8—JOE ORTEGA, Mexican, mule driver, experience two years, age 23 years, single, employed by the Boulder Valley Coal Company at the Boulder Valley mine, Weld county, was killed between a loaded car and roof. At the point where the accident occurred there is an upthrow of the coal seam. Deceased was driving a loaded car, sitting on the front end, when reaching the upthrow his head struck against the roof, forcing him to the top and side of the car and crushing him so severely that he died shortly after. There is sufficient height in the entry and had deceased exercised proper care the accident could have been avoided.
- (37)—May 9—COSMOS DAVIS, American, machine miner, experience 12 years, age 43 years, married, four children, employed by the Victor-American Fuel Company at the Delagua mine, Las Animas county, was killed by a fall of drawslate. Deceased was working at the face of his room where the coal is overlaid by drawslate about eight inches thick, which either falls when the coal is shot, or is taken down, and the roof then timbered. In this instance, the place had been shot the night before and the slate had fallen, except a small portion. Deceased was in the act of taking this down, when it suddenly gave way, falling on him and breaking his neck. The place was well timbered and deceased was doing his work to the best of his judgment. The accident was due to the inherent danger of the work and no one can be held responsible for it.
- (38)—May 18—BLAZ MARTINEZ, Mexican, machine miner, experience six years, age 29 years, single, employed by the National Fuel Company at the Puritan mine, Weld county, came to his death by a fall of coal. Deceased was loading a car and the probabilities are that he stepped back and his feet were caught in the track tie or rail and he fell, causing a piece of coal weighing about a ton, to roll on him. Death was accidental and no one is blamed.

- (39)—May 22—CIPRIANO SILBA, Mexican, machine miner, experience two years, age 48 years, widower, one son, employed by the Rocky Mountain Fuel Company at the Forbes mine, Las Animas county, was killed by a fall of rock. Deceased and his son were examining the face of their room before commencing to work when a rock fell on the former, killing him instantly. The coal seam at this mine is four feet high and is too low to be cross barred, but the gob was well timbered, only for the track in this part of the mine, is the roof brushed. It appears that deceased had left the brushing behind for 18 feet, having practically loaded out three cuts of coal. The fire boss claims that when he examined the place, there was no indication of danger from the roof. It is evident, however, that the mine officials were careless in allowing the brushing to fall so far behind. Had they made deceased brush after each cut, the accident probably would have been avoided.
- (40)—June 13—MIKE JUMOVECH, Austrian, machine miner, experience 20 years, age 47 years, married, two children, employed by the Gordon Coal Co., at the Gordon mine, Huerfano county, was killed by a fall of rock. The accident occurred in a room which was well timbered but a rock between two cross bars, with a prop under it did not look safe, and deceased decided to take it down. While in the act of prying it loose, it fell killing him instantly. The accident was a misadventure, due to the inherent danger of the work.
- (41)—June 20—JOE DI SANTIS, Italian, pick miner, experience 12 years, age 40 years, married, one child, employed by The Colorado Fuel & Iron Co. at the Berwind mine, Las Animas county, was killed by a fall of rock. Deceased was loading a car with coal in an entry when, without warning, a large pot fell from the roof, killing him instantly. This pot rock was eleven feet long and eight feet wide with an average thickness of two feet and was hard to detect as the slips were invisible. The accident was unforeseen and no one is charged with its responsibility.
- (42)—June 21—BERT POIER, Austrian, pick miner, experience 13 years, age 37 years, single, employed by The Cedar Hill Coal & Coke Co., at the Greenville mine, Las Animas county, was killed by an explosion of powder. The evening before the accident, the shot firer had tamped and charged two shots in the room where deceased was working. The shot on the upper rib had two sticks of powder and was about four feet in depth; shot on lower rib had three sticks and was about four and one-half feet in depth. Deceased had worked off all the coal of both shots with the exception of about fourteen inches of the lower shot when near the back of the hole his pick came in contact with the powder exploding it and causing instant death. Deceased came to his death through no

fault of his own. Mine foreman and shot firer declared under oath that the shots had exploded and shattered and broken the coal of both shots. The accident probably was caused by a missed shot or defective powder which did not ignite when the other powder exploded. The accident may be classed as unavoidable.

- (43)—July 8—ANDREW McCLOSKEY, Lithuanian, pick miner, experience six years, age 40 years, employed by Fruth & Stone at the Leader mine, Huerfano county, came to his death by a fall of rock. The accident occurred at the face of an entry. A piece of drawsplate about one foot in thickness, which was always taken down as soon as the coal was mined from under it, had been left up and not timbered. The accident may be charged to the negligence of deceased and partly to the mine foreman in not making a second examination of working places while the men were in the mine.
- (44)—July 18—JOE GONZALES, Mexican, mule driver, experience six years, age 31 years, married, three children, employed by the Rocky Mountain Fuel Company at the Columbine mine, Weld county, was crushed to death between a loaded car and pillar side. At the point where the accident occurred the width of the roadway is 11 feet and six inches, the height 6 feet. On the right side coming out to the parting the width to the rail is 7 1-2 feet and on the left side, where deceased's head was crushed, the width from the rail to the pillar side is only from 10 to 12 inches. Deceased was riding on the front bumper on the left side of the car, when from some cause unknown, his head was caught between the car and pillar side. Deceased should have kept his head toward the wide side.
- (45)—July 20—SOSIO SALVATI, Italian, pick miner, experience ten years, age 37 years, single, employed by the Oakdale Coal Company, Huerfano county, came to his death by a fall of rock. Deceased was working in a pillar on an entry. He had been told by the mine foreman to take down a rock the evening before the accident occurred, but he did not do so. The next morning he was in the act of timbering the rock when it came down before he could get out of the way. Disobedience on part of deceased and carelessness of the mine foreman in not seeing that his instructions were promptly complied with before leaving the working place, led to the accident.
- (46)—August 1—FRANCISCO ACOSTA, Mexican, loader, no previous experience in coal mining, age 29 years, married, three children, employed by the Rocky Mountain Fuel Company at the Columbine mine, Weld county, was killed by a fall of drawsplate. At the point where the accident occurred the coal seam is cut by a 19 inch band of drawsplate which is

taken down. On the evening of the accident the night foreman visited the place and attempted to take down a rock, he failed, and left deceased to work under it with the result that five minutes later the rock fell on Acosta, killing him instantly. Deceased had no experience and therefore it was the duty of the official, when he could not get the rock down, to prop it.

(47)—August 12—ATTILIO GUALANDRI, Italian, day man, experience 14 years, single, employed by the Colorado Fuel & Iron Company at the Robinson No. 2 mine, Huerfano county, was killed by a fall of rock. Deceased with several other men was engaged trimming a rib and side, taking down loose rock and putting up props for the purpose of installing electric wires in the entry. A slab of rock came down without warning on deceased, causing such injuries that he died a few hours later. The entry where the accident occurred had been abandoned for some time, the roof is moist and considered good and very little timber is used. Owing to the nature of the work, the roof being moist and the entry having been abandoned for some time, the accident was unforeseen and unavoidable.

(48)—August 26—GUST KATSOULIS, Greek, machine miner, experience ten years, age 36 years, married, three children, employed by the Bear Canon Coal Company at the Bear Canon mine, Las Animas county, came to his death by electrocution. According to evidence, deceased was on the main entry and stepped aside to let a driver pass, and in so doing he came into contact with a bare spot on the feed wires which had been cut out of the insulated wires for the nips. No other part of the wires were exposed except where the nips applied. The accident is classed as unavoidable.

(49)—September 8—ANTHONY FERRARI, Italian, machine miner, experience not given, age 55 years, married, five children, employed by the Big Four Coal and Coke Company at the Centennial mine, Boulder county, was killed by an explosion of black powder. Deceased and seven other employees were in the powder magazine for the purpose of getting their powder supplies. An explosion took place, powder became ignited probably from a spark from a cigarette or pipe, or from a flame from an open light or by striking a match. Four of the men escaped uninjured and the other four were severely burned, Ferrari dying that night. The miners at this mine open their own powder kegs from which they fill their powder jacks.

(50)—September 19—JUAN PANTOJA, Mexican, pick miner, experience 21 days, age 33 years, married, four children, employed by the Victor-American Fuel Company at the Delagua mine, Las Animas county, was killed by a fall of rock. Deceased and his partner were mining coal in a room,

the former on the gob side and the latter on the road side. Deceased had released the inby portion of a large rock which was in the shape of a pot. The place was well timbered, the props being set about four feet from the face, one prop being under the outer edge of the pot. When the rock was released it threw out the prop and fell on deceased, killing him instantly. The accident was unforeseen and no one can be held responsible for it.

(51)—September 19—JACOB GARCIA, Mexican, machine miner, experience 2 years, age 30 years, single, employed by the Temple Fuel Company at the Brodhead No. 9 mine, Las Animas county, came to his death by coming into contact with a live wire. Deceased and his partner were walking out on the haulage road, when the latter was about 60 feet ahead he heard the former scream and hastened back and found him on the wires. He was released soon afterwards but too late to save him despite the application of a Pullmotor. The investigation disclosed that a few weeks previous to the accident, the pumper discovered that two of the wires in the feed line in this section of the mine were broken and he repaired them, but not having any tape with him, left four bare connecting points. He stated that he notified the line man the next day that he had made this splice, but forgot to mention that he had left the connection points uninsulated. There was a little water in the entry and the shoes of deceased being in poor condition, it seems that he tried to walk on a discharge pipe from the inby pump which was running parallel with the track and directly under the trolley line $2\frac{1}{2}$ feet from the feed line. He must have slipped and in trying to save himself he reached out and seized the bare place in the feed line. In all probability the accident would have been avoided had the connecting points been thoroughly insulated or the wires have been of lower voltage which was 440 volts A. C.

(52)—September 22—NICK RELSE, Austrian, miner, experience 16 years, age 42 years, married, two children, employed by the Utah Fuel Company at the Somerset mine, Gunnison county, was killed by a fall of top coal. Deceased and his partner were extracting a chain pillar in an entry. Before starting to work they sounded the roof with a pick and decided to set a prop up against it. The day before, although there were no indications of loose top coal, the mine foreman told them to set up two rows of props, which they did, one row on each side of the track. While they were loading, the top coal caved, covering deceased and killing him instantly. The accident was due to the danger of the work as all safeguards had been taken.

(53)—September 23—JABE SHAW, American, machine miner, experience 32 years, age 57 years, married, four children, em-

ployed by the Aztec Coal Mining Company at the Toltec mine, Huerfano county, was killed by a fall of rock. Deceased was loading machine-cut coal in an entry and the driver cautioned him against a rock that looked unsafe. He neglected to timber it until after he had loaded two cars, he then was in the act of cutting a hitch for a timber when the rock came down on him. The usual distance for cross-bars at this point is about 2 1-2 feet, owing to a heavy drawsplate full of triangular slips. A center prop should have been used until ready for the crossbar. The accident may be charged to the carelessness of deceased and the neglect of the mine foreman in not seeing that the place was properly timbered.

- (54)—September 25—Frank KROVERTIN, Austrian, timberman, several years experience, age 50 years, married, five children, employed by the Canon-Reliance Coal Company at the Canon mine, Fremont county, was killed by a fall of coal. Deceased was working night shift and was packing dirt back in gob in an entry along a long wall face. Preps and gobs were about four feet from coal face. Coal fell and caught deceased between coal and gob wall. He had put in one sprag which was placed about 1 1-2 feet from roof with one end set against a gob prop and the other end against the coal. The accident might have been avoided had sprags been set six feet apart against the bottom at an angle of 45 degrees. The accident was due to the impracticable spragging of the coal and may be properly charged to the carelessness of deceased and to the neglect of the mine foreman in not seeing that the spragging was insufficient and compelling the miner to set sprags before allowing work to start.
- (55)—November 6—ANDREW CHUBA, American, driver, experience one year, age 17 years, employed by the Canon-Reliance Coal Company at the Reliance mine, Huerfano county, came to his death by electrocution. While walking down the main slope, deceased probably stumbled and in an effort to prevent falling his hand was caught in a live bell wire causing a shock. There must have been an excess power of electricity on the bell wire which cannot be accounted for. After the accident the volt meter and voltage conditions were found to be normal. Accident was unforeseen and is not charged to any one.
- (56)—November 7—DEWEY STOKES, American, driver, experience three years, age 23 years, single, employed by the Ohio Creek Coal Mining Company at the Ohio Creek mine, Gunnison county, was killed by a fall of rock. A few hours before the rock fell the roof had been examined and found safe. Deceased was driving a loaded car on the entry and

roof. The accident was unavoidable because there was no indication of danger.

was directly under the rock when it broke loose from the
(57)—November 10—ISIDRO TAFOYA, American, machine miner, experience five years, age 34 years, married, one child, employed by the Temple Fuel Company at the Brodhead No. 10 mine, Las Animas county, was injured by a fall of rock on the 2nd of November and died eight days later. The accident was due to a loose rock in the roof of a room which had been discovered by the mine foreman and who instructed deceased and his partner to set a prop under it. However, the men tested the roof several times and could find no loose rock and therefore neglected to carry out instructions. The accident is charged to the faulty judgment and disobedience of deceased in not heeding the orders of the mine oreman, and to the neglect of the latter in not seeing that his orders were carried out.

(58)—November 13—JOHN FOSTER, Bohemian, driver, experience 15 years, age 30 years, married, no children, employed by the Grand Junction Mining & Fuel Company at the Cameo mine, Mesa county, was killed by a fall of rock. Accident occurred on a pillar entry where there was some broken roof. A row of props had been set about three feet apart on each side of the track and the turn was about 20 feet long with props set as close to the tracks as the passage of the cars would permit. A gun was used in driving through this narrow place and Mr. Foster was riding it when a rock fell between the props and landed on him with fatal results. The falling of the rock was unavoidable, but deceased showed poor judgment in riding the gun in this narrow place and the mine foreman was at fault in allowing him to do so.

(59)—November 16—CHARLES W. EICHINGER, American, pick miner, experience 30 days, age 38 years, married, four children, employed by the Producers Coal Company at the Phillips No. 1 mine, Moffat county, was killed by a fall of rock on the main slope. Deceased was assisting in taking off a skip of coal from the west side of the slope for the purpose of making a double parting. At this point the sandstone roof had been blasted from 16 to 18 inches deep to give sufficient height for the mules to pass under. A shot had been fired into the coal at this point and when deceased started to load coal, a slab of the sandstone fell on him killing him. It appeared that the shot into the coal opened up an half circle slip in the roof close to the coal face and caused the rock to fall. No one saw or knew of this slip until the rock fell. The accident was unforeseen and no one is held resopnsible for it.

- (60)—November 17—HUGH WILSON, American, eager, experience five years, age 24 years, married, one child, employed by the Colorado Fuel & Iron Company at the Fremont mine, Fremont county, was killed by a cage. Deceased's glove was caught by ascending cage which pulled him up between the cage and side of shaft and dropped him back into the dump. Investigation disclosed nothing wrong with the cage or machinery and accident was a pure misadventure for which no one could be blamed.
- (61)—November 20—JAMES F. FICKES, American, pick miner, experience 10 years, age 32 years, married, no children, employed by his father, Frank M. Fickes, at the Coalby Red Canon mine, Delta county, was killed by a fall of rock. There was a bad piece of rock at the face of the room which several of the men working in the mine tried to pry loose, but succeeded only in breaking off a small piece. Instead of propping it, deceased began to undermine the coal when the rock fell and killed him. Deceased and his father, who was working with him, are equally to blame for the accident. Had the rock been supported by a prop, it would not have fallen.
- (62)—November 21—MATT ADENLADIC, Russian, pick miner, experience four years, age 29 years, single, employed by the Victor-American Fuel Company at the Ravenwood mine, Huerfano county, was killed by a fall of rock. Deceased was found dead under a rock. The room had been examined the morning before the accident and no visible sign of danger was found. A shot had been fired and most of the coal had been taken out when a piece of drawslate broke loose from a slip and fell on deceased causing instant death. The accident was unforeseen and is not charged to anyone.
- (63)—November 22—EDWARD J. BRENNAN, American, pick miner, experience two days, age 21 years, single, employed by the Barry Coal Company at the Rio Blanco mine, Rio Blanco county, was killed by a fall of rock in the drift of the mine. Deceased was working night shift with his father, M. R. Brennan, who claims to have had twenty-five years experience in coal mines. Twenty minutes prior to the accident, he had examined the roof and considered it unsafe but continued to work under it with his son. Just before the rock fell the son said he heard cracking and he realized the immediate danger and tried to pull his son away, but too late to escape. The drift was very poorly timbered in places. The father was guilty of great carelessness in permitting his son to work under a loose rock. The company and M. R. Brennan are jointly to blame for the accident.
- (64)—November 25—JOE STANDISH, American, rope rider, experience six years, age 22 years, single, employed by the

McNeil Coal Company at the McGregor mine, Routt county, came to his death by being run over by a trip of five cars. Deceased was gathering cars for a trip. In taking his last car to a room where his trip was made up, the rope was drawn to one side of the slope and when he gave the signal to pull up, the rope caught in the wing of the point rail and tore it loose and the trip crossed over it and threw deceased in front of it. The company is held responsible for the accident in not supplying a pulley on the slope to prevent the rope from going into the wing of the point rail.

- (65)—November 9—JOHN BLATNICK, Austrian, pick miner, experience 33 years, age 61 years, married, one child, employed by the City Coal Company at the City mine, La Platte county, was injured by a fall of rock at the face of his room and died on the above date. Apparently deceased was unable to see that a piece of loose rock was overhanging his working place and therefore did not take steps to protect himself. The accident is classed as unavoidable.
- (66)—December 7—KENNETH BALDON, American, pick miner, experience ten years, age 28 years, married, three children, employed by the Fox Coal Company at the Fox mine, Boulder county, was injured by a fall of rock and dirt from the surface, from the effects of which he died on the above date. Deceased and his partner were engaged in removing a stump of coal in a chain pillar, where the overlying roof to the surface was very thin, a cave-in occurred covering and imprisoning Baldon for nine hours. When deceased was extricated he did not seem to be seriously injured. A great part of the fall was held up by timbers and a loaded car, however, the weight which held him imprisoned so many hours congested some of his organs and affected his nerves to such an extent that he died seven days later. The place was well timbered and every precaution had been taken to make the place safe, hence the accident is classed as unavoidable.
- (67)—December 7—STEVE VISCOS, Greek, pick miner, experience ten years, age 42 years, married, three children, employed by the Colorado Fuel & Iron Company at the Robinson No. 2 mine, Huerfano county, was killed by a fall of rock. Deceased was working on an entry pillar where an invisible slip had formed a pot. Props had been set under one side of the rock and when coal was taken out on the other side, it overbalanced and discharged the two props releasing the rock. The place was well timbered and the accident was unforeseen and unavoidable.
- (68)—December 8—JOHN SMITH, Pole, track layer, experience 14 years, age 53 years, married, three children, employed by the Leyden Coal Company at the Leyden mine, Jefferson

county, was crushed to death between a car and rib. Deceased with other men was cleaning up and removing a wreckage of cars. Deceased got hold of one car which was being pulled up the entry by the hoist and it had one broken wheel which bulged out over the track clearing the rib by a few inches only. Deceased was walking back of the car on the near side of the rib guiding it, when his shoulder came in contact with the rib, and before he could get out of the way, or the hoistman be signalled to stop, he was caught and crushed. There was ample clearance on the other side of the track. The accident was a mischance and no one is held responsible for it.

(69)—December 9—JOE BLANTIZ, Italian, pick miner, experience two years, age 32 years, married, two children, employed by the Cedar Hill Coal & Coke Company at the Greenville mine, Las Animas county. Deceased was working alone at the face of a room. The coal in this section of the mine is overlaid by a strata of drawslate which is taken down and leaves a fairly good roof. The mine foreman had visited the place at 10:20 A. M. and discovered no danger. At noon deceased was found under a rock. The place was well timbered. Several cars of coal had been loaded and one was turned back in order that drawslate could be taken down and timbers set. Deceased apparently was in the act of taking down the upper half of drawslate when he released a pot which had been completely hid from view. The accident is classed as unforeseen and unavoidable.

(70)—December 11—VERNER McWILLIAMS, American, miner, experience four years, age 21 years, single, employed by the Midwest Coal Company at the Midwest mine, Mesa county, was killed by a fall of coal. Deceased was working alone in a pillar entry taking a skip forward to make room for a track. He had about fifty feet to go to the coal cropping. The coal was good and sound but showed open water breaks running the same course as the butts. He was following one of the water breaks and connected with a face slip which released a lump of coal that fell on him. Deceased showed poor judgment in mining as he did and the mine foreman was at fault in not seeing the danger of the situation. Both are responsible for the accident.

(71)—December 13—C. C. UNDERWOOD, American, machine miner, experience none, age 46 years, married, two children, employed by the Rocky Mountain Fuel Company at the Columbine mine, Weld county, was killed by a fall of top coal. The accident occurred on an entry which is eight feet high. While loading machine-cut coal it was the practice to keep the coal face perpendicular which is dangerous where the coal is so high. Deceased was stepping off a bench about ten inches high left by the mining machine, when he lost his

balance and was caught in a fall of coal. The face boss was not a certified man and he was performing duties that properly belong to a mine foreman. The accident is classed as unavoidable.

- (72)—December 14—MATT BUSTUS, Mexican, pick miner, experience two years, age 35 years, married, two children, employed by the Colorado Fuel & Iron Company at the Morley Slope mine, Las Animas county, was killed by a fall of rock. Deceased was working on the butts about 15 feet from the face of his room. In removing the coal a rock gave way from a slip that was invisible. The place was well timbered and the accident was unavoidable.
- (73)—December 15—DAN KORACH, Servian, machine miner, experience ten years, age 40 years, married, one child, employed by the Rocky Mountain Fuel Company at the Columbine mine, Weld county, was killed by a fall of coal. At 11:00 A. M. deceased and his partner were loading coal in a room and found that they required a little more coal to finish a car. Deceased asked his partner to pull over some bottom coal, but the latter refused on the ground that the top coal was loose. Deceased then proceeded to pull said coal over himself and was caught by a fall of top coal. Thirty minutes prior to the accident the face boss, who holds no certificate, visited the place, and after he left, deceased and his partner fired a shot that released the coal which they were loading. As only thirty minutes passed between face boss' inspection and the accident, and during which time shots had been fired and a car of coal loaded, the place being at least 60 feet in advance of air current, it is very evident that deceased and his partner entered the place immediately after firing shots, probably the powder smoke was so dense that loose top coal could not be seen by deceased. Responsibility for the accident is charged to the company for not employing certified men for mine officials and allowing shooting in the mine at a time prohibited by law.
- (74)—December 29—TRINIDAD CEDENO, Spaniard, motor man, experience eleven years, age 24 years, married, two children, employed by the American Smelting and Refining Company at the Boncarbo mine, Las Animas county, was injured December 28 by being caught between car and motor and died on the following day. Deceased, according to evidence, had arrived with a trip of loaded cars to the first parting and had uncoupled the motor from the trip and backed the motor behind a trip of empty cars, when in some manner unknown, he was caught between an empty car and motor. Deceased was unable to give any information how he happened to be caught. The track was found in good condition and the accident apparently was due to a misadventure.

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