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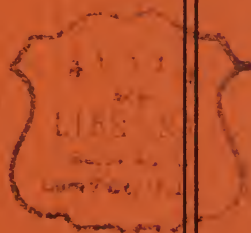
## Second Annual Report

OF THE

# State Inspector of Coal Mines

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1914



DENVER, COLORADO  
THE SMITH-BROOKS PRINTING COMPANY, STATE PRINTERS  
1915



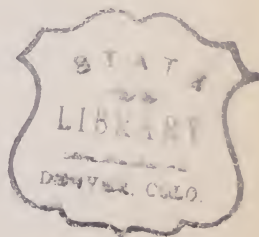
Second Annual Report

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DENVER, COLORADO  
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## PERSONNEL OF THE STATE COAL MINING DEPARTMENT

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### FIELD AND OFFICE

|                        |                  |
|------------------------|------------------|
| JAMES DALRYMPLE.....   | Chief Inspector  |
| FRANK N. OBERDING..... | Deputy Inspector |
| HENRY P. KING.....     | Deputy Inspector |
| JAMES W. GRAHAM.....   | Deputy Inspector |
| ADA R. TIBBITS.....    | Chief Clerk      |
| BIRDIE DORSEY.....     | Assistant Clerk  |

### EXAMINING BOARD FOR INSPECTORS

|                 |                 |
|-----------------|-----------------|
| E. H. Weitzel   | *J. R. Jenkins  |
| George T. Peart | David Griffiths |
| W. H. Adamson   |                 |

### EXAMINING BOARD FOR MINE OFFICIALS

|                 |                |
|-----------------|----------------|
| E. H. Weitzel   | *J. R. Jenkins |
| George T. Peart | W. H. Adamson  |
| James Dalrymple |                |

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\*Resigned.

## LETTER OF TRANSMITTAL

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Denver, Colorado, March 4, 1915.

To His Excellency,

GEORGE A. CARLSON,

Governor of the State of Colorado.

Sir: Herewith I have the honor of submitting to you in accordance with Section 37 of an Act entitled "Coal Mining Laws", the Second Annual Report of this Department. The period covered commences January 1st and ends December 31st, 1914.

Respectfully,

JAMES DALRYMPLE,

State Inspector of Coal Mines.

# STATEMENT SHOWING RECEIPTS AND DISBURSEMENTS FROM JANUARY 1 TO DECEMBER 31, 1914

## RECEIPTS

|  |             |
|--|-------------|
| Tax collected on coal mined.....           | \$27,482.28 |
| From sale of copies of the mining law..... | 1,047.01    |
| Balance brought forward from 1913.....     | \$,204.32   |
| Total .....                                | \$36,733.61 |

## DISBURSEMENTS

|   |             |
|---|-------------|
| Salary of chief inspector.....  | \$ 3,000.00 |
| Salaries of three deputies (\$2,100.00).....  | 6,300.00    |
| Salary of chief clerk.....  | 1,500.00    |
| Salary of assistant clerk.....  | 1,200.00    |
| Expenses—   |             |
| Chief and three deputies (traveling).....   | 3,980.03    |
| Translation of the coal mining law into eight languages<br>and printing 15,000 copies.....      | 1,887.55    |
| Printing monthly and annual report blanks and three kinds<br>of record books for all mines..... | 1,402.04    |
| Telephone and telegraph service.....  | 70.55       |
| Stamps .....  | 210.00      |
| Instruments (adding machine).....   | 351.00      |
| Miscellaneous (to repairs of anemometers, safety lamps,<br>etc.) .....                          | 62.55       |
| Express .....   | 5.21        |
| Stationery supplies .....   | 83.09       |
| File case .....   | 77.90       |
| Unpaid salaries for October, 1913.....  | 315.81      |
| Total .....   | \$20,445.70 |
| Surplus .....   | \$16,287.85 |

REMARK: In the financial statement of 1913 the refund of \$3,921.28 was erroneously charged twice to the Coal Mine Inspection Fund. The surplus should have read \$8,204.32 instead of \$4,283.04.

# SUMMARY OF THE COAL PRODUCTION OF COLORADO, 1914

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|   |            |
|---|------------|
| Number of mines in operation.....                                 | 188        |
| Number of new mines opened.....                                   | 13         |
| Number of old mines reopened.....                                 | 17         |
| Number of mines closed, 19; abandoned, 2; total.....              | 21         |
| Tons of lignite coal produced.....                                | 1,946,369  |
| Tons of semi-bituminous coal produced.....                        | 409,704    |
| Tons of bituminous coal produced.....                             | 5,795,483  |
| Tons of anthracite coal produced.....                             | 49,867     |
| Total number of tons of coal produced.....                        | 8,201,423  |
| Decrease in 1914.....   | 1,067,516  |
| Tons of run-of-mine coal produced.....                            | 3,433,053  |
| Tons of lump coal produced.....                                   | 2,272,489  |
| Tons of nut coal produced.....                                    | 430,233    |
| Tons of slack coal produced.....                                  | 2,065,848  |
| Per cent of slack.....  | 43.4       |
| Tons of coal mined by hand.....                                   | 5,882,119  |
| Tons of coal mined by machine.....                                | 2,319,304  |
| Total number of machines used—air, 140; electric, 141; total..... | 281        |
| Tons of coal shipped out of the state.....                        | 1,496,247  |
| Average number of days worked for all producing mines.....        | 176.9      |
| Number of men employed as miners.....                             | 5,618      |
| Total number of men employed in and about the mines.....          | 10,596     |
| Daily production of each miner (average).....                     | 8.2        |
| Annual production of each miner (average).....                    | 1,451      |
| Total number of tons of coke produced.....                        | 666,458    |
| Total number of coke ovens in operation.....                      | 1,582      |
| Total number of men employed at coke ovens.....                   | 533        |
| Gallons of illuminating and miner's oil used (approximately)..... | 28,315     |
| Number of kegs of black powder used.....                          | 55,747     |
| Number of pounds of permissible powder used.....                  | 687,423    |
| Amount of compensation paid for death and injury.....\$           | 73,256.53  |
| Cost of development during the year.....\$                        | 440,056.60 |
| Number of men killed underground.....                             | 71         |
| Number of men killed on surface.....                              | 4          |
| Total number of men killed.....                                   | 75         |
| Number of men injured.....  | 356        |
| Number killed per 1,000 employed.....                             | 7          |

|  |           |
|--|-----------|
| Number injured per 1,000 employed.....                   | 33.6      |
| Number of tons produced for each life lost.....          | 109,352.3 |
| Number of tons produced for each non-fatal accident..... | 23,037.7  |
| Number of widows left.....                               | 40        |
| Number of children left fatherless.....                  | 92        |



# Second Annual Report

of the

## State Inspector of Coal Mines

### 1914

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#### INTRODUCTION

The amount of coal mined in the state during the year 1914 when compared with that mined during 1913 shows a decrease of 1,067,516 tons.

Among the causes for the decrease are the European War, the Mexican War, the Colorado Coal Strike and the exceedingly mild Fall and Winter.

The coal miners' strike was called off December 10, 1914, and it is sincerely hoped that this action will result in benefiting every one concerned and that more satisfactory means will be found to settle all future industrial disputes, and that Colorado has seen its last strike.

The vital sections of the mining law are now printed in the following languages, and are for sale at this office, to-wit: Italian, Greek, Bulgarian, Polish, German, Croatian, Spanish and Japanese. Some of these languages cover several kindred dialects, for instance, the Croatian in Latin print can be read by the Slavonian, Servian and the Bosnia-Herzegovinian, Dalmatian and Montenegrin. The work of translating was all done in Denver, and each translation before being printed was submitted and approved by practical miners, each of whom was a native of the above mentioned nationalities. It is very important that all foreign employes capable of reading any of the above named languages have a copy, and the employers should do all in their power to compel them to secure them.

Four mines were closed down by the department because of unsafe or unsanitary conditions.

Fifteen complaints were filed for alleged violations of the law, seven against miners and two against mine foremen and six against operators. Five of the miners were found guilty, one suit is still pending and one was dismissed. One of the mine

foremen was dismissed and the other has not yet been brought to trial. Five of the operators were found guilty and one was dismissed.

Complaints have been made that the law is not being enforced to its full extent. The grounds for these complaints arise from the delays which take place in court proceedings. As instances of these, I cite the following:

A. One case filed in February, 1913, has not yet come to trial.

B. One Judge after hearing a case declared that in his opinion, "The law had been violated," but he dismissed the defendant because the recommendations calling attention to the violations had not been made sufficiently long prior to the filing of the information.

C. A Deputy District Attorney would not allow the witnesses to testify against the defendant.

The present law requires the Inspector to initiate all prosecutions. Had the Department proceeded to file information against all violators, the Inspectors' time would have been far more taken up in Court than in the mines, so that informations have only been filed against the most serious violations. It is necessary to prosecute under certain conditions, yet it is not desirable as it creates a strained relation between defendants and this department, which interferes with the co-operation so vital to obtain the best results.

In my last report, I recommended the amending of the law, and one of the sections needing amending is Section 110, which should place the responsibility of the prosecution of all violations coming under their notice on Mine Foremen, Assistant Mine Foremen and Fire Bosses.

During the year, seventy-two lives were lost in the mines from accidents, and one of these, Antone Segato, who was electrocuted in the Sopris new mine, is not charged to the company. Segato was employed in the old mine and was trespassing at the time he was electrocuted. Four lives were lost by accident on the surface and two miners died from natural causes in the mines.

Reports by inspectors on these fatal accidents show that forty-two of them were caused by carelessness or negligence, eight from disobedience and six from incompetence of deceased; five from carelessness or incompetence of Mine Foreman or his assistants and eight from carelessness of operator, four from carelessness of contractor and one from carelessness of a co-worker. The responsibility of five accidents was not determined, four were unavoidable and as above stated two from natural causes. Education and discipline alone can remedy this condition. Discipline can only be obtained through the education of the employe to his duties as defined in the mining law, the working rules of the mine

and to be made to understand the need of obeying orders given him by the Mine Foreman or such persons as are delegated by him to carry out his duties.

Mine Foremen or their assistants should give more attention to the condition of the working places when making their daily visits, and wherever danger is discovered, have the cause of it removed at once or taken care of without any delay. Any employe who refuses or fails to carry out direction given him by his superior should be promptly withdrawn from the mine.

Compared with 1913, the number of lives lost per thousand employed has been reduced from 8.6 to 7. The tons of coal produced per fatal accident was increased from 84,263 in 1913 to 109,352.3 in 1914. Tons produced per non-fatal accident decreased from 26,183 in 1913 to 23,037.7 in 1914. This decrease in tons produced per non-fatal accident I believe is entirely due to the fact, that accidents are now being reported, that no mention was made of under the old law. While there is still room for great reduction, I consider the showing a creditable one, when taking into consideration the abnormal labor conditions under which the mines were operated.

Five hundred and thirty-eight non-fatal accidents were reported to the Department, two hundred thirty-two from falls of rock and coal, one hundred and eighty-three from mine cars and motors, twenty-three from machinery, eight from gas explosion and ninety-two from miscellaneous causes, and are classified as follows:

|               |     |
|---------------|-----|
| Serious ..... | 144 |
| Minor .....   | 212 |
| Trivial ..... | 182 |

The information covering these non-fatal accidents is so meagre that in classifying them I had to depend, to a great extent, upon my judgment. I am urging the operators in the future to give length of time employees are disabled and to report the non-fatal accidents in such a manner that it will enable this department to make a proper classification of such accidents. Accidents disabling for less than five days should not be reported to this office. The accidents classified as "Trivial" are not charged against the industry thus leaving three hundred and fifty-six non-fatal accidents chargeable.

The question has been raised relative to charging to companies some of the accidents taking place on the surface, such as: James Cochran, killed by a runaway team while unloading lumber to be used in timbering the Rockvale shaft, or Catano LaLama who was killed by a larry car at the Sopris coke ovens. These two accidents have no connection with the direct production of coal, yet were on the mining property, and they happened while the deceased were in the employ of the companies. The mining



laws should specify more definitely the accidents to be charged to mining.

The deaths from falls of rock or coal or both were reduced from forty-eight in 1913 to thirty-eight in 1914. The deaths from electric motors and mine cars increased from seven to eighteen, from electrocution, from two to five and from electric mining machines from none to three.

Three of the five men electrocuted met their deaths through coming in contact with "insulated" wires in damp places. This clearly demonstrates the urgent necessity of adopting a suitable standard for insulation, especially where mines are at all damp.

In some of the coal mines a system of letting contracts in certain sections of the mine to a contractor, who in turn sub-contracts part of his contract to others, is practiced. The contractor agrees with the company to mine and load coal, timber the places and lay the tracks. He sub-contracts the loading of the coal only, attending to the timbering and other work himself, so that when coal is shot down in several places at the regular blasting time, the sub-contractor, if his place requires timbering before starting to load the coal, has to wait until the contractor finds the time to do the timbering, and as there may be several places needing timbering at this particular time, the contractor cannot attend to all of them at once. This results in one of two things: the sub-contractor has either to remain idle until timbering is done or take chances under a dangerous roof while loading the coal, that he would not be called upon to take if he did not have to wait for the timbering to be done. This system does not result in proper care and safety of the employes and should be abolished. There are several instances in which the Deputy Inspectors and myself have felt obliged to withdraw a sub-contractor from his work and send for the contractors to carry out the necessary timbering.

The returns given of the powder used in several mines, and our observation of the results therefrom, show that excessive charges are much too general. The excess takes place in several mines employing Shot-firers, even when such men do the tamping and loading, they cannot fully judge the effect of the charges unless they have the opportunity of examining the places as soon as possible after the shots have been fired. It is only by such examinations that they are able to judge the amount of powder necessary for effective and safe shooting.

I strongly recommend that the Shot-firers examine all places shot as soon as conditions will allow, to see the results of the shots fired.

The present haphazard method of determining charges increases the danger of initiating dust explosions, and unnecessarily heavy charges are to blame for the high percentage of coal produced in the form of slack.

In mines where the coal is sheared or shot off the solid there is a tendency to drill holes too deep. In some mines this is very common and the result of such deep drilling is financially disastrous to both employers and employees and is attended with great danger to life and property. Where Shot-firers are employed they must examine the holes, the charge to be inserted and do the tamping, and will be held strictly responsible. Where the coal is sheared, if any hole is fired where the shearing is not six inches deeper than the hole, or where a shot is taken off the solid and the same is more than four feet in thickness, Certified Shot-firers found to have fired them will be prosecuted and their certificates will be canceled.

Generally speaking, the conditions of mines have very much improved. This is especially true in Boulder and Weld Counties where great improvements have been made, especially from a sanitary standpoint.

The cheerful and prompt acceptance by the operators of suggestions and recommendations tending toward safer and more sanitary conditions in the mines cannot be too highly commended, and this action upon their part has produced a feeling of mutual confidence between them and the Department, which is proving invaluable in our work.

The tables in the biennial report for 1911 and 1912 and the annual reports for 1913-1914 showing the number of lives lost per one thousand employed by companies, were put in for the express purpose of showing where they stood in relation to the loss of life in connection with the mining of coal. In going over these reports it will be found that several companies operating under no greater hazard than their neighbors have a very high death rate every year for the above period. These companies must take notice of this condition and make increased efforts to reduce the death rate by giving more attention to measures which tend to the safety of their employees.

The mileage covered by the inspectors in the performance of their duties during the year amounted to 48,151 miles and cost \$1,685.28. This did not include the cost of Pullman fares.

In conclusion I wish to tender to all the employees of the Department my thanks and appreciation of their loyal and able assistance. To the Deputy Inspectors, Messrs. Frank M. Oberdink, Henry King and James W. Graham, belongs much of the credit for the present improved conditions of the mines. They have been untiring in their efforts in this direction and carried out their work in a highly satisfactory manner.

Respectfully,

JAMES DALRYMPLE.

TABLE 1

SHOWING BY COMPANIES NUMBER OF MEN EMPLOYED, NUMBER  
KILLED, AND NUMBER INJURED PER 1,000 EMPLOYED

| Name of Company                     | No. Men<br>Employed | No. Men<br>Killed | No. Men<br>Injured | No. Men<br>Killed<br>per 1,000<br>Employed | No. Men<br>Injured<br>per 1,000<br>Employed |
|-------------------------------------|---------------------|-------------------|--------------------|--|---|
| Alliance Coal Co.....               | 93                  | ..                | 4                  | ..   | 43  |
| Aztec Coal Co.....                  | 7                   | ..                | 1                  | ..   | 142.8                                       |
| Big Four Coal Co.....               | 145                 | ..                | 2                  | ..   | 13.8  |
| Big Six Coal Co.....                | 43                  | ..                | 2                  | ..   | 46.5  |
| Black Canon Fuel Co.....            | 61                  | ..                | 2                  | ..   | 32.8  |
| Breen Coal Co.....                  | 50                  | 1                 | 1                  | 50   | 50  |
| Brooks Harrison Coal Co.....        | 22                  | 1                 | 1                  | 40.5                                       | 40.5  |
| Brookside Coal Co.....              | 13                  | ..                | 1                  | ..   | 77—   |
| Calumet Fuel Co.....                | 88                  | 1                 | 2                  | 11.4                                       | 22.8  |
| Carbon Coal & Coke Co.....          | 188                 | ..                | 12                 | ..   | 63.8  |
| Cedar Hill Coal & Coke Co.....      | 201                 | 1                 | 1                  | 4.9  | 4.9   |
| Chicosa Fuel Co.....                | 142                 | 1                 | ..                 | 7.4  | ..  |
| Colorado Central Coal Mining Co.... | 46                  | 3                 | 1                  | 65.2                                       | 21.7  |
| Colorado Fuel & Iron Co.....        | 3,111               | 23                | 90                 | 7.39                                       | 28.9  |
| Consolidated Coal & Coke Co.....    | 125                 | ..                | 5                  | ..   | 40  |
| Crested Butte Anthracite Co.....    | 60                  | ..                | 1                  | ..   | 16.7  |
| Dorr, J. M.....                     | 3                   | 1                 | ..                 | 333  | ..  |
| Electric Coal Co.....               | 18                  | ..                | 1                  | ..   | 55.6  |
| El Paso County Land & Fuel Co....   | 95                  | ..                | 5                  | ..   | 52.6  |
| Empire Coal Co.....                 | 25                  | ..                | 1                  | ..   | 40  |
| Evans Fuel Co.....                  | 37                  | ..                | 2                  | ..   | 54  |
| Farmers Progressive Coal Co.....    | 5                   | 1                 | ..                 | 200  | ..  |
| Fox Coal Mining Co.....             | 65                  | 2                 | 1                  | 61.6                                       | 30.8  |
| Frederick Fuel Co.....              | 82                  | ..                | 2                  | ..   | 24.4  |
| Garfield Mine Leasing Co.....       | 36                  | ..                | 1                  | ..   | 28  |
| Jordan Coal Co.....                 | 33                  | 1                 | ..                 | 33.3                                       | .   |
| Grand Junction Mine Leasing Co....  | 117                 | ..                | 2                  | ..   | 17.2  |
| Great Matchless Fuel Co.....        | 82                  | ..                | 3                  | ..   | 36.6  |
| Hanby & Ames.....                   | 2                   | 1                 | ..                 | 500  | ..  |
| Hayden Bros. Corporation.....       | 95                  | 1                 | 12                 | 10.5                                       | 126   |
| Huerfano Coal Co.....               | 88                  | ..                | 2                  | ..   | 22.7  |
| Leyden Coal Co.....                 | 150                 | 1                 | 8                  | 5  | 40.2  |

TABLE 1—Concluded

SHOWING BY COMPANIES NUMBER OF MEN EMPLOYED, NUMBER  
KILLED, AND NUMBER INJURED PER 1,000 EMPLOYED

| Name of Company                     | No. Men<br>Employed | No. Men<br>Killed | No. Men<br>Injured | No. Men<br>Killed<br>per 1,000<br>Employed | No. Men<br>Injured<br>per 1,000<br>Employed |
|-------------------------------------|---------------------|-------------------|--------------------|--|---|
| Minnequa Coal Co.....               | 138                 | ..                | 3                  | ..   | 21.7  |
| Moffat Coal Co.....                 | 180                 | 2                 | 14                 | 11.1                                       | 77.7  |
| Monument Valley Coal Co.....        | 38                  | 1                 | ..                 | 26.3                                       | ..  |
| Mutual Coal Co.....                 | 20                  | ..                | 2                  | ..   | 100   |
| National Fuel Co.....               | 277                 | ..                | 8                  | ..   | 28.9  |
| Northern Colorado Coal Co.....      | 65                  | ..                | 2                  | ..   | 30.8  |
| Oakdale Coal Co.....                | 204                 | 2                 | 9                  | 9.8  | 44  |
| Petry Coal Co.....                  | 4                   | ..                | 1                  | ..   | 250   |
| Pike's Peak Fuel Co.....            | 125                 | 1                 | ..                 | 8  | ..  |
| Porter Fuel Co.....                 | 54                  | 1                 | 1                  | 18.5                                       | 18.5  |
| Primrose Coal Co.....               | 80                  | 1                 | 1                  | 12.5                                       | 12.5  |
| Rapson Coal Mining Co.....          | 167                 | ..                | 10                 | ..   | 59.9  |
| Rocky Mountain Fuel Co.....         | 892                 | 5                 | 52                 | 5.6  | 58.3  |
| Routt County Fuel Co.....           | 108                 | 4                 | 8                  | 37   | 74  |
| Routt Electric Coal Co.....         | 53                  | ..                | 4                  | ..   | 75.5  |
| Royal Fuel Co.....                  | 46                  | 2                 | 4                  | 43.5                                       | 87  |
| Royal Gorge Coal & Fire Clay Co.... | 22                  | ..                | 1                  | ..   | 46  |
| Royal Leasing Co.....               | 9                   | ..                | 2                  | ..   | 222.2                                       |
| Rugby Fuel Co.....                  | 43                  | 1                 | 14                 | 23.3                                       | 325.5                                       |
| South Canon Coal Co.....            | 57                  | ..                | 3                  | ..   | 52.5  |
| Southern Colorado Coal Co.....      | 41                  | 1                 | ..                 | 24.4                                       | ..  |
| Southwestern Fuel Co.....           | 7                   | ..                | 1                  | ..   | 143   |
| State Coal Co.....                  | 6                   | ..                | 3                  | ..   | 500   |
| Sunnyside Coal Mining Co.....       | 59                  | 1                 | 6                  | 17   | 101.7                                       |
| Temple Fuel Co.....                 | 38                  | 1                 | 1                  | 26.3                                       | 26.3  |
| Turner Coal Co.....                 | 33                  | ..                | 2                  | ..   | 60.6  |
| Union Coal & Coke Co.....           | 78                  | ..                | 7                  | ..   | 89.7  |
| Utah Fuel Co.....                   | 204                 | ..                | 12                 | ..   | 58.8  |
| Victor-American Fuel Co.....        | 889                 | 11                | 15                 | 12.37                                      | 16.9  |
| Walsenburg Coal Mining Co.....      | 90                  | ..                | 1                  | ..   | 11.1  |
| Wooton Land & Fuel Co.....          | 138                 | 1                 | ..                 | 7.25                                       | ..  |
| Yampa Valley Fuel Co.....           | 86                  | 1                 | 3                  | 11.6                                       | 35  |
| State of Colorado.....              | 10,596              | 75                | 356                | 7.+  | 33.6  |

TABLE 2

SHOWING BY COMPANIES TOTAL PRODUCTION AND NUMBER OF MEN EMPLOYED FOR EACH  
FATAL AND NON-FATAL ACCIDENT DURING THE YEAR 1914

| Name of Company or Operator            | No. of Men<br>Employed | Total Pro-<br>duction | No. of Fatal<br>Accidents | No. of Men<br>Employed<br>per Fatal<br>Accident | No. of Tons<br>Produced<br>per Fatal<br>Accident | No. of Non-<br>Fatal Ac-<br>cidents | No. of Men<br>Employed per<br>Non-Fatal<br>Accident | No. of Tons<br>Produced per<br>Non-Fatal<br>Accident |
|--|------------------------|-----------------------|---------------------------|---|--|-------------------------------------|---|--|
| Alliance Coal Co.....                  | 93                     | 80,515                | ..                        | ..  | ....   | 4                                   | 23.25   | 20,129   |
| Amador Fuel Co.....                    | 7                      | 3,369                 | ..                        | ..  | ....   | ..                                  | ..  | ....   |
| Aztec Coal Mining Co.....              | 7                      | 4,319                 | ..                        | ..  | ....   | 1                                   | 7   | 4,319  |
| Baldwin Fuel Co.....                   | 7                      | 1,468                 | ..                        | ..  | ....   | ..                                  | ..  | ....   |
| Baldy Coal Co.....                     | 10                     | 7,263                 | ..                        | ..  | ....   | ..                                  | ..  | ....   |
| Bear River Coal Co.....                | 42                     | 3,562                 | ..                        | ..  | ....   | ..                                  | ..  | ....   |
| Big Four Coal & Coke Co.....           | 145                    | 113,988               | ..                        | ..  | ....   | 2                                   | 72.5  | 56,994   |
| Big Six Coal Co.....                   | 43                     | 20,914                | ..                        | ..  | ....   | 2                                   | 21.5  | 10,457   |
| Billstrom, C. O.....                   | 4                      | 2,484                 | ..                        | ..  | ....   | ..                                  | ..  | ....   |
| Black Canon Fuel Co.....               | 61                     | 41,086                | ..                        | ..  | ....   | 2                                   | 30.5  | 21,043   |
| Black Diamond Nigger-Head Coal Co..... | 3                      | 1,005                 | ..                        | ..  | ....   | ..                                  | ..  | ....   |
| Bond, J. C.....                        | 2                      | 435                   | ..                        | ..  | ....   | ..                                  | ..  | ....   |
| Book Cliff R. R. Co.....               | 15                     | 14,176                | ..                        | ..  | ....   | ..                                  | ..  | ....   |
| Breen Coal Mining Co.....              | 20                     | 19,328                | 1                         | 20  | 19,328   | 1                                   | 20  | 19,328   |



|   |       |           |    |       |         |    |       |         |
|---|-------|-----------|----|-------|---------|----|-------|---------|
| Brooks-Harrison Fuel Co.....            | 22    | 24,980    | 1  | 22    | 24,980  | 1  | 22    | 24,980  |
| Brookside Coal Co.....                  | 13    | 9,694     | .. | ..    | ....    | 1  | 13    | 9,694   |
| Calumet Fuel Co.....                    | 88    | 63,297    | 1  | 88    | 63,297  | 2  | 44    | 31,648  |
| Carbonado Coal Mining Co.....           | 30    | 24,820    | .. | ..    | ....    | .. | ..    | ....    |
| Carbon Coal Co.....                     | 2     | 233       | .. | ..    | ....    | .. | ..    | ....    |
| Carbon Coal & Coke Co.....              | 188   | 257,793   | .. | ..    | ....    | 12 | 15.65 | 21,483  |
| Cedar Hill Coal & Coke Co.....          | 201   | 159,174   | 1  | 201   | 159,174 | 1  | 201   | 159,174 |
| Chicosa Fuel Co.....                    | 142   | 68,139    | 1  | 142   | 68,139  | .. | ..    | ....    |
| Clark & Benedict.....                   | 2     | 60        | .. | ..    | ....    | .. | ..    | ....    |
| Clark, G. A.....                        | 2     | 864       | .. | ..    | ....    | .. | ..    | ....    |
| Collom, Joseph .....                    | 1     | 300       | .. | ..    | ....    | .. | ..    | ....    |
| Colorado Central Coal & Mining Co.....  | 46    | 3,594     | 3  | 15.33 | 1,198   | 1  | 46    | 3,594   |
| Colorado Fuel & Iron Co.....            | 3,111 | 2,189,946 | 23 | 135.3 | 95,215  | 90 | 34.6  | 24,333  |
| Colorado & Utah Coal Co.....            | 53    | 14,586    | .. | ..    | ....    | .. | ..    | ....    |
| Consolidated Coal & Coke Co.....        | 125   | 106,451   | .. | ..    | ....    | 5  | 25    | 21,290  |
| Converse, Frank .....                   | 2     | 704       | .. | ..    | ....    | .. | ..    | ....    |
| Coryell, P. C.....                      | 1     | 765       | .. | ..    | ....    | .. | ..    | ....    |
| Crested Butte Anthracite Mining Co..... | 60    | 1,210     | .. | ..    | ....    | 1  | 60    | 1,210   |
| Crested Butte Coal Co.....              | 20    | 4,222     | .. | ..    | ....    | .. | ..    | ....    |
| David, Joseph .....                     | 3     | 1,357     | .. | ..    | ....    | .. | ..    | ....    |
| David, T. D.....                        | 5     | 1,250     | .. | ..    | ....    | .. | ..    | ....    |
| Donnelly Coal Co.....                   | 5     | 2,145     | .. | ..    | ....    | .. | ..    | ....    |
| Dorr, J. M.....                         | 3     | ....      | 1  | 3     | ....    | .. | ..    | ....    |
| Dugger Coal Co.....                     | 2     | 981       | .. | ..    | ....    | .. | ..    | ....    |

TABLE 2—Continued

SHOWING BY COMPANIES TOTAL PRODUCTION AND NUMBER OF MEN EMPLOYED FOR EACH  
FATAL AND NON-FATAL ACCIDENT DURING THE YEAR 1914

| Name of Company or Operator          | No. of Men<br>Employed | Total Pro-<br>duction | No. of Fatal<br>Accidents | No. of Men<br>Employed<br>per Fatal<br>Accident | No. of Tons<br>Produced<br>per Fatal<br>Accident | No. of Non-<br>Fatal Ac-<br>cidents | No. of Men<br>Employed<br>per<br>Non-Fatal<br>Accident | No. of Tons<br>Produced per<br>Non-Fatal<br>Accident |
|--------------------------------------|------------------------|-----------------------|---------------------------|---|--|-------------------------------------|--|--|
| Eagle Coal Co.....                   | 12                     | 3,807                 | ..                        | ..  | ....   | ..                                  | ..   | ....   |
| Electric Coal Co.....                | 18                     | 7,114                 | ..                        | ..  | ....   | 1                                   | 18   | 7,114  |
| El Paso County Land & Fuel Co.....   | 95                     | 75,514                | ..                        | ..  | ....   | 5                                   | 19   | 15,103   |
| Empire Coal Co.....                  | 25                     | 3,774                 | ..                        | ..  | ....   | 1                                   | 25   | 3,774  |
| Eureka Coal Co.....                  | 10                     | 7,809                 | ..                        | ..  | ....   | ..                                  | ..   | ....   |
| Evans Fuel Co.....                   | 37                     | 27,639                | ..                        | ..  | ....   | 2                                   | 18.5   | 13,819   |
| Farmers Milling & Power Coal Co..... | 3                      | 1,265                 | ..                        | ..  | ....   | ..                                  | ..   | ....   |
| Farmers Progressive Coal Co.....     | 5                      | 2,752                 | 1                         | 5   | 2,752  | ..                                  | ..   | ....   |
| Ferrier, W. T.....                   | 6                      | 680                   | ..                        | ..  | ....   | ..                                  | ..   | ....   |
| Fisher's Peak Coal Co.....           | 3                      | 884                   | ..                        | ..  | ....   | ..                                  | ..   | ....   |
| Fox Coal Mining Co.....              | 65                     | 67,495                | 2                         | 32.5  | 33,748   | 1                                   | 65   | 67,495   |
| Frederick Coal Co.....               | 82                     | 70,930                | ..                        | ..  | ....   | 2                                   | 41   | 35,465   |
| Garfield Coal Mining Co.....         | 8                      | 7,638                 | ..                        | ..  | ....   | ..                                  | ..   | ....   |
| Garfield Mine Leasing Co.....        | 35                     | 28,546                | ..                        | ..  | ....   | 1                                   | 36   | 28,546   |

|                                      |     |         |    |     |         |    |       |        |      |
|--------------------------------------|-----|---------|----|-----|---------|----|-------|--------|------|
| Gilson Asphaltum.....                | 7   | 8,075   | .. | ..  | ....    | .. | ..    | ..     | .... |
| Gordon Coal Co.....                  | 33  | 11,712  | 1  | 33  | 11,712  | .. | ..    | ..     | .... |
| Grand Junction Mining & Fuel Co..... | 117 | 114,899 | .. | ..  | ....    | 2  | 58.5  | 57,499 | .... |
| Grand Mesa Fuel Co.....              | 2   | 826     | .. | ..  | ....    | .. | ..    | ..     | .... |
| Grandview Coal Co.....               | 5   | 3,107   | .. | ..  | ....    | .. | ..    | ..     | .... |
| Great Matchless Coal Co.....         | 82  | 53,054  | .. | ..  | ....    | 3  | 27.33 | 17,685 | .... |
| Gross, Frank .....                   | 1   | 73      | .. | ..  | ....    | .. | ..    | ..     | .... |
| Hanby & Ames.....                    | 2   | ....    | 1  | 2   | ....    | .. | ..    | ..     | .... |
| Hayden Bros. Coal Corporation.....   | 95  | 89,208  | 1  | 95  | 89,208  | 12 | 8     | 7,434  | .... |
| Hotchkiss Fuel & Supply Co.....      | 2   | 437     | .. | ..  | ....    | .. | ..    | ..     | .... |
| Huerfano Coal Co.....                | 88  | 78,045  | .. | ..  | ....    | 2  | 44    | 39,023 | .... |
| Husband, Richard .....               | 3   | 1,162   | .. | ..  | ....    | .. | ..    | ..     | .... |
| Ideal Coal Co.....                   | 13  | 9,738   | .. | ..  | ....    | .. | ..    | ..     | .... |
| Jeffries Coal Mining Co.....         | 6   | 4,737   | .. | ..  | ....    | .. | ..    | ..     | .... |
| Johnstone Coal & Coke Co.....        | 17  | 8,769   | .. | ..  | ....    | .. | ..    | ..     | .... |
| Jones & Irwin.....                   | 10  | 3,433   | .. | ..  | ....    | .. | ..    | ..     | .... |
| Jones, T. B. & Co.....               | 19  | 19,729  | .. | ..  | ....    | .. | ..    | ..     | .... |
| Juanita Coal & Coke Co.....          | 84  | 78,037  | .. | ..  | ....    | .. | ..    | ..     | .... |
| La Plante & Sons.....                | 4   | 1,298   | .. | ..  | ....    | .. | ..    | ..     | .... |
| Last Dollar Coal Co.....             | 3   | 75      | .. | ..  | ....    | .. | ..    | ..     | .... |
| Lewis, J. T.....                     | 5   | 2,375   | .. | ..  | ....    | .. | ..    | ..     | .... |
| Leyden Coal Co.....                  | 199 | 141,536 | 1  | 199 | 141,536 | 8  | 25    | 17,685 | .... |
| Littell Coal & Mining Co.....        | 48  | 35,135  | .. | ..  | ....    | .. | ..    | ..     | .... |
| Loma Fuel Co.....                    | 16  | 18,417  | .. | ..  | ....    | .. | ..    | ..     | .... |

TABLE 2—Continued

SHOWING BY COMPANIES TOTAL PRODUCTION AND NUMBER OF MEN EMPLOYED FOR EACH  
FATAL AND NON-FATAL ACCIDENT DURING THE YEAR 1914

| Name of Company or Operator    | No. of Men<br>Employed | Total Pro-<br>duction | No. of Fatal<br>Accidents | No. of Men<br>Employed<br>per Fatal<br>Accident | No. of Tons<br>Produced<br>per Fatal<br>Accident | No. of Non-<br>Fatal Ac-<br>cidents | No. of Men<br>Employed per<br>Non-Fatal<br>Accident | No. of Tons<br>Produced per<br>Non-Fatal<br>Accident |
|--------------------------------|------------------------|-----------------------|---------------------------|---|--|-------------------------------------|---|--|
| Louisville Coal & Land Co..... | 65                     | 57,098                | ..                        | ..  | ....   | ..                                  | ..  | ....   |
| Mancoes Fuel Co.....           | 6                      | 500                   | ..                        | ..  | ....   | ..                                  | ..  | ....   |
| Marchette, A.....              | 6                      | 6,751                 | ..                        | ..  | ....   | ..                                  | ..  | ....   |
| McPherson, Thos. ....          | 3                      | 757                   | ..                        | ..  | ....   | ..                                  | ..  | ....   |
| Mile High Coal Co.....         | 5                      | 2,437                 | ..                        | ..  | ....   | ..                                  | ..  | ....   |
| Minnequa Coal Co.....          | 138                    | 121,090               | ..                        | ..  | ....   | 3                                   | 46  | 40,363   |
| Mitchell & Graham.....         | 13                     | 416                   | ..                        | ..  | ....   | ..                                  | ..  | ....   |
| Moffat Coal Co.....            | 180                    | 274,490               | 2                         | 90  | 137,245  | 14                                  | 13  | 19,697   |
| Monument Valley Coal Co.....   | 38                     | 22,843                | 1                         | 38  | 22,843   | ..                                  | ..  | ....   |
| Mutual Coal Co.....            | 20                     | 1,745                 | ..                        | ..  | ....   | 2                                   | 10  | 873  |
| National Fuel Co.....          | 277                    | 285,707               | ..                        | ..  | ....   | 8                                   | 35  | 35,713   |
| New Fox Coal Co.....           | 5                      | 300                   | ..                        | ..  | ....   | ..                                  | ..  | ....   |
| New Grand Mesa Coal Co.....    | 2                      | 500                   | ..                        | ..  | ....   | ..                                  | ..  | ....   |
| New Maitland Coal Co.....      | 43                     | 21,506                | ..                        | ..  | ....   | ..                                  | ..  | ....   |

|                                      |     |         |    |     |         |    |       |        |
|--------------------------------------|-----|---------|----|-----|---------|----|-------|--------|
| Northern Colorado Coal Co.....       | 65  | 45,089  | .. | ..  | ....    | 2  | 32.5  | 22,545 |
| Oakdale Coal Co.....                 | 204 | 219,505 | 2  | 102 | 109,753 | 9  | 23    | 24,389 |
| O. K. Coal Co.....                   | 6   | 7,031   | .. | ..  | ....    | .. | ..    | ....   |
| Pagosa Lumber Co.....                | 3   | 2,611   | .. | ..  | ....    | .. | ..    | ....   |
| Palisade Coal & Supply Co.....       | 15  | 6,866   | .. | ..  | ....    | .. | ..    | ....   |
| Paonia Coal Co.....                  | 5   | 5,093   | .. | ..  | ....    | .. | ..    | ....   |
| Patterson Coal Co.....               | 29  | 14,895  | .. | ..  | ....    | .. | ..    | ....   |
| Peerless Coal Co.....                | 3   | 1,831   | .. | ..  | ....    | .. | ..    | ....   |
| Petry Coal Co.....                   | 4   | 2,067   | .. | ..  | ....    | 1  | 4     | 2,067  |
| Pike's Peak Fuel Co.....             | 125 | 129,316 | 1  | 125 | 129,316 | .. | ..    | ....   |
| Porter Fuel Co.....                  | 54  | 37,606  | 1  | 54  | 37,606  | 1  | 54    | 37,606 |
| Primrose Coal Co.....                | 80  | 59,997  | 1  | 80  | 59,997  | 1  | 80    | 59,997 |
| Prospect Coal Co.....                | 9   | 5,656   | .. | ..  | ....    | .. | ..    | ....   |
| Pueblo Fuel & Mining Co.....         | 51  | 16,644  | .. | ..  | ....    | .. | ..    | ....   |
| P. V. Coal Co.....                   | 6   | 5,961   | .. | ..  | ....    | .. | ..    | ....   |
| Rapson Coal Mining Co.....           | 167 | 111,347 | .. | ..  | ....    | 10 | 17    | 11,135 |
| Rocky Mountain Fuel Co.....          | 892 | 807,518 | 5  | 178 | 161,504 | 52 | 17.1  | 15,529 |
| Routt County Fuel Co.....            | 108 | 144,363 | 4  | 27  | 36,091  | 8  | 13.5  | 18,045 |
| Routt Electric Coal Co.....          | 53  | 32,946  | .. | ..  | ....    | 4  | 13.25 | 8,237  |
| Royal Fuel Co.....                   | 46  | 31,418  | 2  | 23  | 15,709  | 4  | 11.5  | 7,855  |
| Royal Gorge Coal & Fire Clay Co..... | 22  | 11,865  | .. | ..  | ....    | 1  | 22    | 11,865 |
| Royal Leasing Co.....                | 9   | 3,372   | .. | ..  | ....    | 2  | 4.5   | 1,686  |
| Rugby Fuel Co.....                   | 43  | 37,624  | 1  | 43  | 37,624  | 14 | 3     | 2,688  |
| Russell Coal Co.....                 | 21  | 4,186   | .. | ..  | ....    | .. | ..    | ....   |

TABLE 2—'concluded

SHOWING BY COMPANIES TOTAL PRODUCTION AND NUMBER OF MEN EMPLOYED FOR EACH  
FATAL AND NON-FATAL ACCIDENT DURING THE YEAR 1914

| Name of Company or Operator               | No. of Men<br>Employed | Total Pro-<br>duction | No. of Fatal<br>Accidents | No. of Men<br>Employed<br>per Fatal<br>Accident | No. of Tons<br>Produced<br>per Fatal<br>Accident | No. of Non-<br>Fatal Ac-<br>cidents | No. of Men<br>Employed<br>per<br>Non-Fatal<br>Accident | No. of Tons<br>Produced<br>per<br>Non-Fatal<br>Accident |
|---|------------------------|-----------------------|---------------------------|---|--|-------------------------------------|--|---|
| San Juan Development & Investment Co..... | 4                      | 665                   | ..                        | ..  | ....   | ..                                  | ..   | ....  |
| Santa Fe Coal Co.....                     | 37                     | 2,361                 | ..                        | ..  | ....   | ..                                  | ..   | ....  |
| Shamrock Coal Co.....                     | 14                     | 10,773                | ..                        | ..  | ....   | ..                                  | ..   | ....  |
| Sheperd, Thos. . . . .                    | 2                      | 378                   | ..                        | ..  | ....   | ..                                  | ..   | ....  |
| Shew, J. P. . . . .                       | 5                      | 915                   | ..                        | ..  | ....   | ..                                  | ..   | ....  |
| South Canon Coal Co.....                  | 57                     | 29,216                | ..                        | ..  | ....   | 3                                   | 19   | 9,739   |
| Southern Colorado Coal Co.....            | 41                     | 8,812                 | 1                         | 41  | 8,812  | ..                                  | ..   | ....  |
| Southwestern Fuel Co.....                 | 7                      | 960                   | ..                        | ..  | ....   | 1                                   | 7  | 960   |
| Spencer, Geo. S.....                      | 2                      | 414                   | ..                        | ..  | ....   | ..                                  | ..   | ....  |
| State Coal Co.....                        | 6                      | 597                   | ..                        | ..  | ....   | 3                                   | 2  | 199   |
| States Coal Co.....                       | 4                      | 3,204                 | ..                        | ..  | ....   | ..                                  | ..   | ....  |
| State Penitentiary Lease.....             | 32                     | 2,632                 | ..                        | ..  | ....   | ..                                  | ..   | ....  |
| Stokes, W. D.....                         | 8                      | 3,606                 | ..                        | ..  | ....   | ..                                  | ..   | ....  |
| St. Vrain Coal Co.....                    | 34                     | 4,537                 | ..                        | ..  | ....   | ..                                  | ..   | ....  |

|   |        |           |    |        |           |     |       |          |
|---|--------|-----------|----|--------|-----------|-----|-------|----------|
| Sunnyside Coal Mining Co.....           | 59     | 37,986    | 1  | 59     | 37,986    | 6   | 10    | 6,331    |
| Surface Creek Co-Operative Coal Co..... | 3      | 1,256     | .. | ..     | ....      | ..  | ..    | ....     |
| Temple Fuel Co.....                     | 38     | 36,180    | 1  | 38     | 36,180    | 1   | 38    | 36,180   |
| Thomas Coal Co.....                     | 12     | 6,738     | .. | ..     | ....      | ..  | ..    | ....     |
| Tudor Coal Co.....                      | 22     | 11,481    | .. | ..     | ....      | ..  | ..    | ....     |
| Turner Coal Co.....                     | 33     | 30,160    | .. | ..     | ....      | 2   | 16.5  | 15,080   |
| Union Coal & Coke Co.....               | 78     | 77,780    | .. | ..     | ....      | 7   | 11    | 11,111   |
| Utah Fuel Co.....                       | 204    | 271,602   | .. | ..     | ....      | 12  | 17    | 22,634   |
| Vaughan, Levi .....                     | 5      | 1,514     | .. | ..     | ....      | ..  | ..    | ....     |
| Victor-American Fuel Co.....            | 889    | 726,408   | 11 | 81     | 66,037    | 15  | 59.3  | 48,427   |
| Walsenburg Coal Mining Co.....          | 90     | 26,848    | .. | ..     | ....      | 1   | 90    | 26,848   |
| Williamsburg Slope Coal Co.....         | 11     | 4,594     | .. | ..     | ....      | ..  | ..    | ....     |
| Wootton Land & Fuel Co.....             | 138    | 25,666    | 1  | 138    | 25,666    | ..  | ..    | ....     |
| Workman, Lon .....                      | 2      | 547       | .. | ..     | ....      | ..  | ..    | ....     |
| Yampa Valley Coal Co.....               | 86     | 92,753    | 1  | 86     | 92,753    | 3   | 28.6  | 30,918   |
| Grand totals .....                      | 10,536 | 8,291,423 | 75 | 140.94 | 109,352.3 | 356 | 29.69 | 29,037.7 |

TABLE 3

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| NUMBER OF FATAL ACCIDENTS IN 1914 |    |
|-----------------------------------|----|
| Underground .....                 | 71 |
| Surface .....                     | 4  |
| <hr/>                             |    |
| Total .....                       | 75 |

TABLE 4

## NUMBER OF FATAL ACCIDENTS—CAUSES AND PERCENTAGES

| Causes                           | Number of<br>Accidents | Per<br>Cent |
|----------------------------------|------------------------|-------------|
| Falls of rock and coal.....      | 38                     | 50.6        |
| Mine cars and motors.....        | 18                     | 24          |
| Electricity .....                | 5                      | 6.6         |
| Electric mining machines.....    | 3                      | 4           |
| From all other causes.....       | 11                     | 14.8        |
| <hr/>                            |                        | <hr/>       |
| Total .....                      | 75                     | 100         |
| Number of widows left.....       | 40                     |             |
| Number of children left.....     | 92                     |             |
| Number of single men killed..... | 35                     |             |

Six children and one widow result of a death from natural causes at the Monarch No. 1 Mine not included.



SHOWING BY COUNTIES MINES OPERATED, NAME OF OPERATOR AND ADDRESS OF MINE, THICKNESS OF COAL BED UNDER OPERATION, KIND OF OPENING, CHARACTER OF COAL, NUMBER OF DAYS WORKED, AVERAGE NUMBER OF MEN EMPLOYED, AND TOTAL NUMBER OF TONS OF COAL PRODUCED IN 1914.

TABLE 5

## ARCHULETA COUNTY, 1914

| Name of Mine             | Name of Operator  | Post-Office<br>Address or<br>Location of<br>Mine | Thickness of<br>Coal-Bed<br>Under<br>Operation | Kind of<br>Opening | Character<br>of Coal | Number of<br>Days Worked | Average No.<br>of Men<br>Employed | Total No.<br>of Tons<br>Produced |
|--------------------------|-------------------|--|--|--------------------|----------------------|--------------------------|-----------------------------------|----------------------------------|
| Tallan                   | Pagosa Lumber Co. | Pagosa Junction                                  | 4 ft.  | Drift              | Bituminous           | 184                      | 3                                 | 2,611                            |
| Number of mines operated |                   |  | 1  |                    |                      | 184                      | 3                                 | 2,611                            |

TABLE 6  
BOULDER COUNTY, 1914

| Name of Mine  | Name of Operator         | Post-Office<br>Address or<br>Location of<br>Mine | Thickness of<br>Coal-Bed<br>Under<br>Operation | Kind of<br>Opening | Character<br>of Coal | Number of<br>Days Worked | Average No.<br>of Men<br>Employed | Total No.<br>of Tons<br>Produced |
|---------------|--------------------------|--|--|--------------------|----------------------|--------------------------|-----------------------------------|----------------------------------|
| Simpson       | Rocky Mountain Fuel Co.  | Lafayette  | .....6 to 14 ft.                               | Shaft              | Lignite              | 213                      | 100                               | 128,561                          |
| Standard      | Rocky Mountain Fuel Co.  | Lafayette  | .....4 to 6 ft.                                | Shaft              | Lignite              | 214.5                    | 120                               | 165,676                          |
| Mitchell      | Rocky Mountain Fuel Co.  | Lafayette  | .....6 to 12 ft.                               | Shaft              | Lignite              | 246                      | 51                                | 56,936                           |
| Vulcan        | Rocky Mountain Fuel Co.  | Lafayette  | .....8 ft.                                     | Shaft              | Lignite              | 255.5                    | 51                                | 53,777                           |
| Rex No. 1     | Rocky Mountain Fuel Co.  | Louisville                                       | .....6 ft.                                     | Shaft              | Lignite              | 156                      | 79                                | 75,788                           |
| Rex No. 2     | Rocky Mountain Fuel Co.  | Louisville                                       | .....6 ft.                                     | Shaft              | Lignite              | 234                      | 27                                | 14,963                           |
| Hecla         | Rocky Mountain Fuel Co.  | Louisville                                       | .....6 ft.                                     | Shaft              | Lignite              | 200                      | 60                                | 41,568                           |
| Gorham        | Rocky Mountain Fuel Co.  | Gorham   | .....5 ft.                                     | Slope              | Lignite              | 231                      | 165                               | 94,676                           |
| Industrial    | Rocky Mountain Fuel Co.  | Superior   | .....6 ft. 5 in.                               | Shaft              | Lignite              | 189.7                    | 89                                | 77,234                           |
| Monarch No. 1 | National Fuel Co.        | Downer   | .....5 to 7 ft.                                | Shaft              | Lignite              | 230.5                    | 52                                | 31,956                           |
| Monarch No. 2 | National Fuel Co.        | Broomfield                                       | .....4½ to 9 ft.                               | Shaft              | Lignite              | 201.5                    | 80                                | 77,764                           |
| Fox           | Fox Coal Mining Co.      | Gorham   | .....8 ft.                                     | Shaft              | Lignite              | 245                      | 65                                | 67,495                           |
| Matchless     | Great Matchless Coal Co. | Louisville                                       | .....4 ft. 7 in.                               | Shaft              | Lignite              | 201.5                    | 82                                | 53,654                           |
| Centennial    | Big Four Coal & Coke Co. | Louisville                                       | .....5 ft.                                     | Shaft              | Lignite              | 168.7                    | 60                                | 36,049                           |
| Nonpareil     | Brooks-Harrison Fuel Co. | Louisville                                       | .....9 to 10 ft.                               | Shaft              | Lignite              | 254                      | 22                                | 24,980                           |

|                               |                        |                  |       |       |         |       |       |         |
|-------------------------------|------------------------|------------------|-------|-------|---------|-------|-------|---------|
| Sunnyside .....               | Big Six Coal Co.....   | Louisville ..... | 4 ft. | Shaft | Lignite | 207   | 43    | 20,914  |
| Strathmore .....              | T. B. Jones & Co.....  | Lafayette .....  | 8 ft. | Shaft | Lignite | 249   | 19    | 19,729  |
| Electric .....                | Electric Coal Co.....  | Lafayette .....  | 5 ft. | Shaft | Lignite | 153   | 18    | 7,114   |
| Mile High.....                | Mile High Coal Co..... | Lafayette .....  | 7 ft. | Shaft | Lignite | 252   | 5     | 2,437   |
| Lewis .....                   | J. T. Lewis.....       | Marshall .....   | 8 ft. | Drift | Lignite | 200   | 5     | 2,375   |
| Black Diamond.....            | Mitchell & Graham..... | Boulder .....    | 6 ft. | Slope | Lignite | 90    | 13    | 416     |
| New Fox.....                  | New Fox Coal Co.....   | Gorham .....     | 7 ft. | Drift | Lignite | 60    | 5     | 300     |
| <hr/>                         |                        |                  |       |       |         |       |       |         |
| Number of mines operated..... |                        |                  |       | 22    |         | 203.3 | 1,151 | 993,702 |



TABLE 8

## EL PASO COUNTY, 1914

| Name of Mine                  | Name of Operator                    | Post-Office<br>Address or<br>Location of<br>Mine | Thickness of<br>Coal-Bed<br>Under<br>Operation | Kind of<br>Opening | Character<br>of Coal | Number of<br>Days Worked | Average No.<br>of Men<br>Employed | Total No.<br>of Tons<br>Produced |
|-------------------------------|-------------------------------------|--|--|--------------------|----------------------|--------------------------|-----------------------------------|----------------------------------|
| Pikeview                      | .....Pike's Peak Fuel Co.           | .....Colorado Springs                            | ..7 to 12 ft.                                  | Shaft              | Lignite              | 272                      | 125                               | 123,316                          |
| El Paso                       | .....El Paso County Land & Fuel Co. | .....Colorado Springs                            | ...7 to 9 ft.                                  | Slope              | Lignite              | 257                      | 95                                | 75,514                           |
| Rapson No. 2                  | .....Rapson Coal Mining Co.         | .....Colorado Springs                            | .....7 ft.                                     | Shaft              | Lignite              | 285                      | 63                                | 43,883                           |
| Patterson                     | .....Alexander Patterson            | .....Colorado                                    | .....Springs                                   | Slope              | Lignite              | 242                      | 29                                | 14,895                           |
| Danville                      | .....Tudor Coal Co.                 | .....Colorado Springs                            | ..8 to 20 ft.                                  | Slope              | Lignite              | 168                      | 22                                | 11,481                           |
| Williamsville                 | .....Thomas Coal Co.                | .....Colorado Springs                            | .....7 ft.                                     | Slope              | Lignite              | 208                      | 12                                | 6,738                            |
| Franceville                   | .....Thos. D. Davis                 | .....Colorado Springs                            | ..5 ft. 5 in.                                  | Slope              | Lignite              | 160                      | 5                                 | 1,250                            |
| Clark                         | .....Charles A. Clark               | .....Colorado Springs                            | .....3 ft.                                     | Slope              | Lignite              | 25                       | 2                                 | 60                               |
| Number of mines operated..... |                                     |  |  |                    |                      | 202.5                    | 353                               | 283,142                          |

Number of mines operated..... 8

TABLE 9

## FREMONT COUNTY, 1914

| Name of Mine  | Name of Operator                   | Post-Office<br>Address or<br>Location of<br>Mine | Thickness of<br>Coal-Bed<br>Under<br>Operation | Kind of<br>(Opening | Character<br>of Coal | Number of<br>Days Worked | Average No.<br>of Men<br>Employed | Total No.<br>of Tons<br>Produced |
|---|------------------------------------|--|--|---------------------|----------------------|--------------------------|-----------------------------------|----------------------------------|
| Chandler  | Victor-American Fuel Co.           | Chandler   | .....5 ft.                                     | Shaft               | Semi-bituminous      | 298                      | 126                               | 166,489                          |
| Radiant   | Victor-American Fuel Co.           | Radiant  | .....3 ft. 10 in.                              | Slope               | Semi-bituminous      | 196                      | 44                                | 24,983                           |
| Royal Gorge   | Royal Gorge Coal & Fire Clay Co.   | Canon City                                       | .....3 to 8 ft.                                | Slope               | Semi-bituminous      | 244                      | 22                                | 11,865                           |
| Brookside   | Brookside Coal Co.                 | Canon City                                       | .....6 ft.                                     | Slope               | Semi-bituminous      | 253                      | 13                                | 9,694                            |
| Emerald   | Williamsburg Slope Coal Co.        | Williamsburg                                     | .....3 ft.                                     | Slope               | Semi-bituminous      | 153                      | 11                                | 4,594                            |
| Smith-Tanner  | Eagle Coal Co.                     | Florence   | .....2 ft. 10 in.                              | Slope               | Semi-bituminous      | 250                      | 12                                | 3,807                            |
| Central   | Colorado Central Coal & Mining Co. | Canon City                                       | .....5 ft.                                     | Shaft               | Semi-bituminous      | 102                      | 46                                | 3,594                            |
| Nonac   | State Penitentiary Lease           | Canon City                                       | .....6 ft. 6 in.                               | Slope               | Semi-bituminous      | 73                       | 32                                | 2,693                            |
| Williamsburg Slope  | Donnelly Coal Co.                  | Florence   | .....3 ft. 4 in.                               | Slope               | Semi-bituminous      | 234                      | 5                                 | 2,145                            |
| Willie  | Petry Coal Co.                     | Florence   | .....3 ft.                                     | Slope               | Semi-bituminous      | 246                      | 4                                 | 2,067                            |
| Dubble Dick   | Richard Husband                    | Coal Creek                                       | .....2 ft. 5 in.                               | Slope               | Semi-bituminous      | 190                      | 3                                 | 1,162                            |
| Fremont   | Colorado Fuel & Iron Co.           | Fremont  | .....4 ft. 9 in.                               | Slope               | Semi-bituminous      | ..                       | 12                                | 379                              |
| Coal Creek  | Colorado Fuel & Iron Co.           | Coal Creek                                       | .....4 ft.                                     | Slope               | Semi-bituminous      | ..                       | ..                                | 11                               |
| Number of mines operated (Fremont and Coal Creek not included).... 11 |                                    |  |  |                     |                      | 203.5                    | 330                               | 173,483                          |

TABLE 10

## GARFIELD COUNTY, 1914

| Name of Mine                  | Name of Operator            | Post-Office<br>Address or<br>Location of<br>Mine | Thickness of<br>Coal-Bed<br>Under<br>Operation | Kind of<br>Opening | Character<br>of Coal | Number of<br>Days Worked | Average No.<br>of Men<br>Employed | Total No.<br>of Tons<br>Produced |
|-------------------------------|-----------------------------|--|--|--------------------|----------------------|--------------------------|-----------------------------------|----------------------------------|
| Midland                       | Rocky Mountain Fuel Co.     | Sunlight   | .....7 to 11 ft.                               | Slope              | Bituminous           | 184.5                    | 50                                | 50,126                           |
| South Canon                   | South Canon Coal Co.        | South Canon                                      | .....18 ft.                                    | Drift              | Bituminous           | 321                      | 57                                | 29,216                           |
| Vulcan                        | Garfield Mine Leasing Co.   | Newcastle  | .....6 to 14 ft.                               | Drift              | Bituminous           | 273                      | 36                                | 28,546                           |
| Carbonera                     | Gilson Asphaltum Co.        | Mack   | .....5 to 8 ft.                                | Drift              | Bituminous           | 271                      | 7                                 | 8,075                            |
| Mascot                        | Farmers Milling & Power Co. | Glenwood Springs                                 | .....6 to 8 ft.                                | Drift              | Bituminous           | 133                      | 3                                 | 1,266                            |
| Harvey Gap                    | P. C. Coryell               | Newcastle  | .....8 to 10 ft.                               | Drift              | Bituminous           | 191                      | 1                                 | 765                              |
| Number of mines operated..... |                             |  |  |                    |                      | 227.6                    | 154                               | 117,994                          |

Number of mines operated..... 6

TABLE 11

## GUNNISON COUNTY, 1914

| Name of Mine              | Name of Operator                  | Post-Office<br>Address or<br>Location of<br>Mine | Thickness of<br>Coal-Bed<br>Under<br>Operation | Kind of<br>Opening | Character<br>of Coal | Number of<br>Days Worked | Average No.<br>of Men<br>Employed | Total No.<br>of Tons<br>Produced |
|---------------------------|-----------------------------------|--|--|--------------------|----------------------|--------------------------|-----------------------------------|----------------------------------|
| Somerset                  | Utah Fuel Co.                     | Somerset   | .....24 ft.                                    | Slope              | Bituminous           | 246.9                    | 204                               | 271,602                          |
| Alpine                    | Rocky Mountain Fuel Co.           | Baldwin  | .....7 ft.                                     | Slope              | Semi-bituminous      | 224.3                    | 63                                | 38,556                           |
| Porter                    | Littell Coal & Mining Co.         | Crested Butte                                    | ....5 ft. 6 in.                                | Drift              | Bituminous           | 226                      | 48                                | 35,133                           |
| Floresta                  | Colorado Fuel & Iron Co.          | Crested Butte                                    | ....3 ft. 6 in.                                | Slope              | Anthracite           | 217                      | 86                                | 32,013                           |
| Horace                    | Pueblo Fuel & Mining Co.          | Crested Butte                                    | .....3 ft.                                     | Slope              | Anthracite           | 231                      | 51                                | 16,644                           |
| Bulkley                   | Crested Butte Coal Co.            | Crested Butte                                    | .....6 ft.                                     | Slope              | Bituminous           | 91                       | 20                                | 4,222                            |
| Baldwin-Star              | Baldwin Fuel Co.                  | Baldwin  | .....7 ft.                                     | Drift              | Bituminous           | 76                       | 7                                 | 1,468                            |
| Great Western             | Joseph David                      | Gunnison   | .....5 ft.                                     | Drift              | Semi-bituminous      | 119                      | 3                                 | 1,357                            |
| New Baldwin               | La Plante & Sons                  | Gunnison   | .....5 ft.                                     | Slope              | Bituminous           | 153.5                    | 4                                 | 1,298                            |
| Smith                     | Crested Butte Anthracite Min. Co. | Crested Butte                                    | ....4 ft. 4 in.                                | Slope              | Anthracite           | 25                       | 60                                | 1,210                            |
| Number of mines operated. |                                   |  |  |                    |                      | 160.9                    | 546                               | 403,563                          |



TABLE 12

## HUERFANO COUNTY, 1914

| Name of Mine    | Name of Operator             | Post-Office<br>Address or<br>Location of<br>Mine | Thickness of<br>Coal-Bed<br>Under<br>Operation | Kind of<br>Opening | Character<br>of Coal | Number of<br>Days Worked | Average No.<br>of Men<br>Employed | Total No.<br>of Tons<br>Produced |
|-----------------|------------------------------|--|--|--------------------|----------------------|--------------------------|-----------------------------------|----------------------------------|
| Walsen .....    | Colorado Fuel & Iron Co..... | Walsen .....                                     | .....5 ft. 6 in.                               | Slope              | Bituminous           | 287.6                    | 292                               | 191,661                          |
| Rouse .....     | Colorado Fuel & Iron Co..... | Rouse .....                                      | .....6 ft.                                     | Slope              | Bituminous           | 292.5                    | 216                               | 180,732                          |
| Cameron .....   | Colorado Fuel & Iron Co..... | Farr .....                                       | .....4 ft 6 in.                                | Slope              | Bituminous           | 286.4                    | 147                               | 118,378                          |
| Lester .....    | Colorado Fuel & Iron Co..... | Lester .....                                     | .....6 ft.                                     | Slope              | Bituminous           | 293.1                    | 165                               | 104,513                          |
| Ideal .....     | Colorado Fuel & Iron Co..... | Ideal .....                                      | .....3 ft 6 in.                                | Slope              | Bituminous           | 306                      | 118                               | 86,609                           |
| Robinson .....  | Colorado Fuel & Iron Co..... | Walsen .....                                     | .....5 ft. 6 in.                               | Slope              | Bituminous           | 295                      | 191                               | 75,471                           |
| McNally .....   | Colorado Fuel & Iron Co..... | Walsenburg .....                                 | .....5 ft. 6 in.                               | Shaft              | Bituminous           | 76                       | 36                                | 2,464                            |
| Pictou .....    | Colorado Fuel & Iron Co..... | Pictou .....                                     | .....4 to 11 ft.                               | Slope              | Bituminous           | ...                      | 16                                | 106                              |
| Oakdale .....   | Oakdale Coal Co.....         | Oakview .....                                    | .....7 to 14 ft.                               | Slope              | Bituminous           | 298                      | 204                               | 219,505                          |
| Tioga... ..     | Minnequa Coal Co.....        | Tioga .....                                      | .....6 to 7 ft.                                | Slope              | Bituminous           | 272                      | 138                               | 121,000                          |
| Reliance .....  | Alliance Coal Co.....        | Ojo .....  | .....5½ to 14 ft.                              | Slope              | Bituminous           | 268                      | 93                                | 80,515                           |
| Big Four .....  | Big Four Coal & Coke Co..... | Tioga .....                                      | .....7 and 3 ft. 8 in.                         | Slope              | Bituminous           | 243                      | 85                                | 77,939                           |
| Pryor .....     | Union Coal & Coke Co.....    | Pryor .....                                      | .....6 and 4 ft. 6 in.                         | Slope              | Bituminous           | 280                      | 78                                | 77,780                           |
| Ravenwood ..... | Victor-American Fuel Co..... | Ravenwood .....                                  | .....2 to 3 ft.                                | Slope              | Bituminous           | 303                      | 91                                | 51,555                           |
| Caddell .....   | Black Canon Fuel Co.....     | Walsenburg .....                                 | .....3 ft.                                     | Slope              | Bituminous           | 228.5                    | 61                                | 11,086                           |

TABLE 12—Concluded

## HUERFANO COUNTY, 1914

| Name of Mine                  | Name of Operator           | Post-Office<br>Address of<br>Mine | Thickness of<br>Coal-Bed<br>Under<br>Operation | Kind of<br>Opening | Character<br>of Coal | Number of<br>Days Worked | Average No.<br>of Men<br>Employed | Total No.<br>of Tons<br>Produced |
|-------------------------------|----------------------------|-----------------------------------|--|--------------------|----------------------|--------------------------|-----------------------------------|----------------------------------|
| Sunnyside .....               | Sunnyside Coal Mining Co.  | Strong                            | 5½, 6 and 7 ft.                                | Slope              | Bituminous           | 245                      | 59                                | 37,986                           |
| Rugby .....                   | Rugby Fuel Co.             | Rugby                             | .....4 ft.                                     | Slope              | Bituminous           | 275                      | 43                                | 37,624                           |
| Turner .....                  | Turner Coal Co.            | Walsenburg                        | .....8 ft.                                     | Slope              | Bituminous           | 224.5                    | 33                                | 30,460                           |
| Rockland .....                | Walsenburg Coal Mining Co. | Walsenburg                        | .....5 ft.                                     | Shaft              | Bituminous           | 113                      | 90                                | 26,848                           |
| Carbonado .....               | Carbonado Coal Mining Co.  | Walsenburg                        | .....3 to 4 ft.                                | Shaft              | Bituminous           | 245.3                    | 30                                | 24,820                           |
| Larimore .....                | Monument Valley Coal Co.   | Strong                            | .....6 and 3 ft.                               | Slope              | Bituminous           | 246                      | 38                                | 22,843                           |
| Black Canon .....             | New Maitland Coal Co.      | Walsenburg                        | .....2½ to 3 ft.                               | Slope              | Bituminous           | 234.5                    | 43                                | 21,268                           |
| Breen .....                   | Breen Coal Mining Co.      | Walsenburg                        | .....5 ft.                                     | Slope              | Bituminous           | 260                      | 20                                | 19,338                           |
| Loma .....                    | Loma Fuel Co.              | Walsenburg                        | .....5 ft.                                     | Slope              | Bituminous           | 247                      | 16                                | 18,417                           |
| Gordon .....                  | Gordon Coal Co.            | Walsenburg                        | .....5 ft.                                     | Slope              | Bituminous           | 128                      | 33                                | 11,712                           |
| Toltec .....                  | Aztec Coal Mining Co.      | Walsenburg                        | .....3 to 4 ft.                                | Slope              | Bituminous           | 307                      | 7                                 | 4,319                            |
| Mutual .....                  | Mutual Coal Co.            | Walsenburg                        | .....7 ft.                                     | Shaft              | Bituminous           | 29                       | 20                                | 1,745                            |
| Pinon .....                   | Rocky Mountain Fuel Co.    | McGuire                           | .....5 ft.                                     | Shaft              | Bituminous           | 51                       | 7                                 | 282                              |
| <hr/>                         |                            |                                   |  |                    |                      |                          |                                   |                                  |
| Number of mines operated..... |                            |                                   |  |                    |                      | 226.3                    | 2,370                             | 1,686,606                        |





TABLE 15  
LA PLATA COUNTY, 1914

| Name of Mine                  | Name of Operator                | Post-Office<br>Address or<br>Location of<br>Mine | Thickness of<br>Coal-Bed<br>Under<br>Operation | Kind of<br>Opening | Character<br>of Coal | Number of<br>Days Worked | Average No.<br>of Men<br>Employed | Total No.<br>of Tons<br>Produced |
|-------------------------------|---------------------------------|--|--|--------------------|----------------------|--------------------------|-----------------------------------|----------------------------------|
| Perins Peak                   | Calumet Fuel Co.                | Perins   | .....4 ft. 6 in.                               | Drift              | Bituminous           | 215.8                    | 88                                | 63,297                           |
| Hesperus                      | Porter Fuel Co.                 | Hesperus   | .....5 ft. 6 in.                               | Drift              | Semi-bituminous      | 143.9                    | 54                                | 37,606                           |
| San Juan                      | Carbon Coal & Coke Co.          | Durango  | .....3 to 4 ft. 6 in.                          | Drift              |                      |                          |                                   |                                  |
| O. K.                         | O. K. Coal Co.                  | Durango  | .....6 ft.                                     | and Slope          | Bituminous           | 303                      | 29                                | 23,329                           |
| City                          | Royal Leasing Co.               | Durango  | .....2 ft. 6 in.                               | Drift              | Bituminous           | 234                      | 6                                 | 7,031                            |
| Peerless                      | San Juan Development & Inv. Co. | Durango  | .....  | Tunnel             | Bituminous           | 168                      | 9                                 | 3,372                            |
|                               |                                 |  | .....  | Slope              | Bituminous           | 67                       | 4                                 | 605                              |
| Carbon                        | Carbon Coal Co.                 | Durango  | .....2 ft.                                     | Drift              | Bituminous           | 84                       | 2                                 | 233                              |
| Number of mines operated..... |                                 |  |  |                    |                      | 173.6                    | 192                               | 135,513                          |

TABLE 16

## LAS ANIMAS COUNTY, 1914

| Name of Mine                | Name of Operator           | Post-Office<br>Address or<br>Location of<br>Mine | Thickness of<br>Coal-Bed<br>Under<br>Operation | Kind of<br>Opening | Character<br>of Coal | Number of<br>Days Worked | Average No.<br>of Men<br>Employed | Total No.<br>of Tons<br>Produced |
|-----------------------------|----------------------------|--|--|--------------------|----------------------|--------------------------|-----------------------------------|----------------------------------|
| Primero .....               | Colorado Fuel & Iron Co.   | Primero .....                                    | .....6 ft.                                     | Drift              | Bituminous           | 288.1                    | 376                               | 302,325                          |
| Frederick .....             | Colorado Fuel & Iron Co.   | Valdez .....                                     | .....5 ft. 6 in.                               | Drift              | Bituminous           | 283.1                    | 334                               | 302,360                          |
| Moley .....                 | Colorado Fuel & Iron Co.   | Morley .....                                     | .....5 ft.                                     | Drift              | Bituminous           | 293                      | 250                               | 235,385                          |
| Tabasco .....               | Colorado Fuel & Iron Co.   | Tabasco .....                                    | .....6 ft.                                     | Slope              | Bituminous           | 287                      | 179                               | 165,582                          |
| Sopris .....                | Colorado Fuel & Iron Co.   | Sopris .....                                     | .....3 to 5 ft.                                | Drift and<br>Slope | Bituminous           | 203                      | 301                               | 149,565                          |
| Berwind .....               | Colorado Fuel & Iron Co.   | Berwind .....                                    | .....5 ft. 2 in.                               | Drift              | Bituminous           | 290                      | 222                               | 122,563                          |
| Tercio .....                | Colorado Fuel & Iron Co.   | Tercio .....                                     | .....6 ft.                                     | Drift              | Bituminous           | 290.5                    | 91                                | 55,494                           |
| Delagua .....               | Victor-American Fuel Co.   | Delagua .....                                    | .....5 to 6 ft. 10 in.                         | Slope              | Bituminous           | 289                      | 380                               | 335,068                          |
| Hastings .....              | Victor-American Fuel Co.   | Hastings .....                                   | .....5 to 6 ft. 3 in.                          | Slope              | Bituminous           | 290                      | 137                               | 129,437                          |
| Gray Creek .....            | Victor-American Fuel Co.   | Gray Creek .....                                 | .....3 to 5 ft. 6 in.                          | Drift              | Bituminous           | 297                      | 111                               | 78,876                           |
| Cokedale Nos. 1 and 2 ..... | Carbon Coal & Coke Co.     | Cokedale .....                                   | .....3 to 6 ft.                                | Slope and<br>Drift | Bituminous           | 276.5                    | 159                               | 234,424                          |
| Toller .....                | Cedar Hill Coal & Coke Co. | Tollerburg .....                                 | .....6 ft.                                     | Shaft              | Bituminous           | 298                      | 114                               | 121,892                          |
| Greenville .....            | Cedar Hill Coal & Coke Co. | Ludlow .....                                     | .....6 ft.                                     | Slope              | Bituminous           | 184                      | 67                                | 36,557                           |
| Black Diamond .....         | Cedar Hill Coal & Coke Co. | Cedarhurst .....                                 | .....3 ft. 8 in.                               | Slope              | Bituminous           | 26                       | 20                                | 725                              |
| Ludlow .....                | Huerfano Coal Co.          | Ludlow .....                                     | .....4 to 6 ft.                                | Drift              | Bituminous           | 301                      | 88                                | 78,045                           |
| Piedmont .....              | Rocky Mountain Fuel Co.    | Piedmont .....                                   | .....4 to 6 ft.                                | Slope              | Bituminous           | 205                      | 77                                | 53,128                           |

|                               |   |                                 |       |            |       |       |           |
|-------------------------------|---|---------------------------------|-------|------------|-------|-------|-----------|
| Majestic .....                | Rocky Mountain Fuel Co.....                   | Majestic .....                  | Drift | Bituminous | 188   | 13    | 16,397    |
| Forbes No. 9.....             | Chicosa Fuel Co.....                          | Forbes .....3½ to 7 ft. 6 in.   | Drift | Bituminous | 272   | 117   | 66,635    |
| Forbes No. 6.....             | Chicosa Fuel Co.....                          | Forbes .....3½ to 7 ft. 6 in.   | Drift | Bituminous | 19    | 25    | 1,444     |
| Rapson No. 1.....             | Rapson Coal Mining Co.....                    | Rapson .....3 to 4 ft.          | Slope | Bituminous | 250   | 104   | 67,459    |
| Primrose .....                | Primrose Coal Co.....                         | Rugby 3 ft. 8 in. & 5 ft. 3 in. | Slope | Bituminous | 301.5 | 80    | 59,997    |
| Kenneth .....                 | Temple Fuel Co.....                           | Tabasco .....4 ft.              | Drift | Bituminous | 283   | 38    | 36,180    |
| Royal .....                   | Royal Fuel Co.....                            | Agular .....6 ft. 6 in.         | Shaft | Bituminous | 261.5 | 46    | 31,418    |
| Wootton .....                 | Wootton Land & Fuel Co.....                   | Wootton .....4 ft. 6 in.        | Drift | Bituminous | 105   | 113   | 24,146    |
| Turner .....                  | Wootton Land & Fuel Co.....                   | Wootton .....4 ft. 6 in.        | Drift | Bituminous | 19    | 25    | 1,520     |
| Brodhead No. 9.....           | Southern Colorado Coal Co.....                | Brodhead .....3 to 10 ft.       | Slope | Bituminous | 82    | 41    | 8,812     |
| Viola .....                   | Johnstone Coal & Coke Co.....                 | Trinidad .....3 to 3 ft. 6 in.  | Slope | Bituminous | 161   | 11    | 7,903     |
| Wiley .....                   | Johnstone Coal & Coke Co.....                 | Trinidad .....4 ft.             | Drift | Bituminous | 49    | 6     | 866       |
| Baldy .....                   | Baldy Coal Co.....                            | Trinidad .....5 to 6 ft.        | Slope | Bituminous | 182   | 10    | 7,253     |
| Prospect .....                | Prospect Coal Co.....                         | Trinidad .....2 ft. 10 in.      | Drift | Bituminous | 310   | 9     | 5,656     |
| Blooms .....                  | Jeffries Coal Mining Co.....                  | Trinidad .....5 ft.             | Drift | Bituminous | 260   | 6     | 4,737     |
| Empire .....                  | Empire Coal Co.....                           | Agular .....6 ft.               | Slope | Bituminous | 68.5  | 25    | 3,774     |
| Amador .....                  | Amador Fuel Co.....                           | Agular .....2 ft. 6 in.         | Drift | Bituminous | 131.5 | 7     | 3,369     |
| Santa Fe .....                | Santa Fe Coal Co.....                         | Starkville .....4 to 6 ft.      | Drift | Bituminous | 34.5  | 37    | 2,361     |
| Nigger Head .....             | Black Diamond Niggerhead Coal Mining Co. .... | Trinidad .....4 ft. 2 in.       | Drift | Bituminous | 84    | 3     | 1,405     |
| Southwestern .....            | Southwestern Fuel Co.....                     | Agular .....3 and 4 ft.         | Slope | Bituminous | 59    | 7     | 960       |
| Ferril .....                  | J. P. Shew.....                               | Trinidad .....2 ft. 9 in.       | ..... | Bituminous | 162   | 5     | 915       |
| Fisher's Peak .....           | Fisher's Peak Coal Co.....                    | Trinidad .....3 ft. 8 in.       | Slope | Bituminous | 205   | 3     | 884       |
| McPherson .....               | Thos. McPherson .....                         | Sopris .....1½ to 2 ft. 8 in.   | Drift | Bituminous | 159   | 3     | 757       |
| Number of mines operated..... |   |                                 |       |            | 198.7 | 3,640 | 2,756,284 |

TABLE 17

## MESA COUNTY, 1914

| Name of Mine                  | Name of Operator                 | Post-Office<br>Address or<br>Location of<br>Mine | Thickness of<br>Coal-Bed<br>Under<br>Operation | Kind of<br>Opening | Character<br>of Coal | Number of<br>Days Worked | Average No.<br>of Men<br>Employed | Total No.<br>of Tons<br>Produced |
|-------------------------------|----------------------------------|--|--|--------------------|----------------------|--------------------------|-----------------------------------|----------------------------------|
| Cameo .....                   | Grand Junction Mining & Fuel Co. | Cameo .....                                      | .....6 ft.                                     | Drift              | Semi-bituminous      | 247                      | 117                               | 114,899                          |
| Book Cliff .....              | Book Cliff R. R. Co.             | .....Grand Junction .....                        | .....7 ft.                                     | Drift              | Semi-bituminous      | 141.5                    | 15                                | 14,176                           |
| Garfield .....                | Garfield Coal Mining Co.         | .....Grand Junction .....                        | .....8 ft.                                     | Drift              | Semi-bituminous      | 216                      | 8                                 | 7,638                            |
| Palisade .....                | Palisade Coal & Supply Co.       | .....Palisade .....                              | .....4 ft.                                     | Drift              | Semi-bituminous      | 106                      | 15                                | 6,866                            |
| P. V. ....                    | P. V. Coal Co.                   | .....Cameo .....                                 | .....6 ft.                                     | Drift              | Semi-bituminous      | 241                      | 6                                 | 5,961                            |
| Stokes .....                  | W. D. Stokes                     | .....Palisade .....                              | .....3 ft. 8 in.                               | Drift              | Semi-bituminous      | 196.5                    | 8                                 | 3,606                            |
| Grandview .....               | Grandview Coal Co.               | .....Palisade .....                              | .....4 to 5 ft.                                | Drift              | Semi-bituminous      | 174                      | 5                                 | 3,107                            |
| Riverside (Farmer) ...        | Levi Vaughan                     | .....Palisade .....                              | .....3 ft.                                     | Drift              | Semi-bituminous      | 198                      | 5                                 | 1,514                            |
| Winger .....                  | New Grand Mesa Coal Co.          | .....Palisade .....                              | .....6 ft.                                     | Drift              | Semi-bituminous      | 67                       | 2                                 | 500                              |
| Number of mines operated..... |                                  |  |  |                    |                      | 187.4                    | 181                               | 158,267                          |





TABLE 19  
MONTEZUMA COUNTY, 1914

| Name of Mine                  | Name of Operator     | Post-office<br>Address or<br>Location of<br>Mine | Thickness of<br>Coal-bed<br>(under<br>operation) | Kind of<br>(pening<br>of coal) | Number of<br>Days Worked | Average No.<br>of Men<br>Employed | Total No.<br>of Tons<br>Produced |
|-------------------------------|----------------------|--|--|--------------------------------|--------------------------|-----------------------------------|----------------------------------|
| Peacock                       | .....Mancos Fuel Co. | .....Mancos                                      | .....2 ft. 2 in.                                 | .....Lignite                   | 90                       | 9                                 | 500                              |
| Mancos                        | .....Geo. S. Spencer | .....Mancos                                      | .....2 ft. 6 in.                                 | .....Drift                     | 89                       | 2                                 | 44                               |
| Valley                        | .....Frank Gross     | .....Mancos                                      | .....4 ft. 6 in.                                 | .....Lignite                   | 24                       | 1                                 | 73                               |
| Number of mines operated..... |                      |  |  |                                | 61                       | 9                                 | 587                              |

TABLE 20

## PITKIN COUNTY, 1914

| Name of Mine                  | Name of Operator         | Post-Office<br>Address or<br>Location of<br>Mine | Thickness of<br>Coal-Bed<br>Under<br>Operation | Kind of<br>Opening | Character<br>of Coal | Number of<br>Days Worked | Average No.<br>of Men<br>Employed | Total No.<br>of Tons<br>Produced |
|-------------------------------|--------------------------|--|--|--------------------|----------------------|--------------------------|-----------------------------------|----------------------------------|
| Spring Gulch .....            | Colorado Fuel & Iron Co. | Gulch .....                                      | .....7 ft.                                     | Slope              | Bituminous           | 315                      | 79                                | 63,465                           |
| Marion .....                  | A. Marchetti .....       | Gulch .....                                      | .....5 ft.                                     | Drift              | Bituminous           | 199                      | 6                                 | 6,751                            |
| Number of mines operated..... |                          |  |  |                    |                      | 257                      | 85                                | 70,746                           |

TABLE 21

## ROUTT COUNTY, 1914

| Name of Mine                  | Name of Operator                  | Post-Office<br>Address or<br>Location of<br>Mine | Thickness of<br>Coal-Bed<br>Under<br>Operation | Kind of<br>Opening | Character<br>of Coal | Number of<br>Days Worked | Average No.<br>of Men<br>Employed | Total No.<br>of Tons<br>Produced |
|-------------------------------|-----------------------------------|--|--|--------------------|----------------------|--------------------------|-----------------------------------|----------------------------------|
| Oak Hills No. 1.....          | Moffat Coal Co.....               | Oak Creek .....                                  | .....9 ft.                                     | Slope              | Bituminous           | 269                      | 49                                | 73,800                           |
| Oak Hills No. 2.....          | Moffat Coal Co.....               | Oak Creek .....                                  | .....10 ft.                                    | Drift              | Bituminous           | 294                      | 131                               | 200,490                          |
| Pinnacle .....                | Routt County Fuel Co.....         | Oak Creek .....                                  | .....10 to 14 ft.                              | Drift              | Bituminous           | 286.5                    | 108                               | 144,363                          |
| Yampa Valley No. 1..          | Yampa Valley Coal Co.....         | Pallas .....                                     | .....5 ft. 6 in.                               | Drift              | Bituminous           | 287                      | 51                                | 57,711                           |
| Yampa Valley No. 2..          | Yampa Valley Coal Co.....         | Pallas .....                                     | .....5 ft.                                     | Drift              | Bituminous           | 287                      | 35                                | 35,012                           |
| Juniper .....                 | Hayden Bros. Coal Corporation.... | Oak Creek .....                                  | .....7 ft.                                     | Slope              | Bituminous           | 356                      | 95                                | 89,208                           |
| Electric .....                | Routt Electric Coal Co.....       | Junction City .....                              | .....5 ft.                                     | Drift              | Bituminous           | 175.5                    | 53                                | 32,946                           |
| Harris .....                  | Colorado & Utah Coal Co.....      | Hayden .....                                     | .....8 ft. 6 in.                               | Slope              | Bituminous           | 114                      | 53                                | 14,586                           |
| Bear River .....              | Bear River Coal Co.....           | Hayden .....                                     | .....10 ft.                                    | Slope              | Bituminous           | 124                      | 42                                | 3,552                            |
| Jones-Irwin .....             | Jones-Irwin .....                 | Oak Creek .....                                  | .....4 ft.                                     | Drift              | Bituminous           | 127                      | 10                                | 3,433                            |
| Emerich .....                 | Lon Workman .....                 | Hayden .....                                     | .....  | Drift              | Bituminous           | 145                      | 2                                 | 547                              |
| Number of mines operated..... |                                   |  |  |                    |                      | 221.3                    | 629                               | 655,878                          |

TABLE 22

## WELD COUNTY, 1914

| Name of Mine                  | Name of Operator                  | Post-Office<br>Address of<br>Mine | Thickness of<br>Coal-Bed<br>Under<br>Operation | Kind of<br>Opening | Character<br>of Coal | Number of<br>Days Worked | Average No.<br>of Men<br>Employed | Total No.<br>of Tons<br>Produced |
|-------------------------------|-----------------------------------|-----------------------------------|--|--------------------|----------------------|--------------------------|-----------------------------------|----------------------------------|
| Puritan                       | .....Erie                         | .....10 ft.                       | ShaftNational Fuel Co.                         | .....              | Lignite              | 212.5                    | 121                               | 116,871                          |
| Parkdale                      | .....National Fuel Co.            | .....Lafayette                    | .....7 to 10 ft.                               | Slope              | Lignite              | 275                      | 24                                | 29,116                           |
| Baum                          | .....Consolidated Coal & Coke Co. | .....Dacono                       | .....7 ft. 6 in.                               | Shaft              | Lignite              | 168.5                    | 125                               | 106,451                          |
| Frederick                     | .....Frederick Fuel Co.           | .....Frederick                    | .....7 ft. 4 in.                               | Slope              | Lignite              | 239.5                    | 82                                | 70,930                           |
| Firestone                     | .....Louisville Coal & Land Co.   | .....Firestone                    | .....6 to 9 ft.                                | Shaft              | Lignite              | 163.7                    | 65                                | 57,098                           |
| Evans                         | .....Evans Fuel Co.               | .....Frederick                    | .....6 to 9 ft.                                | Shaft              | Lignite              | 118                      | 37                                | 27,639                           |
| Shamrock                      | .....Shamrock Coal Co.            | .....Erie                         | .....10 ft.                                    | Shaft              | Lignite              | 236                      | 14                                | 10,773                           |
| Ideal                         | .....Ideal Coal Co.               | .....Erie                         | .....8 ft.                                     | Slope              | Lignite              | 193                      | 13                                | 9,738                            |
| Eureka                        | .....Eureka Coal Co.              | .....Erie                         | .....8 ft.                                     | Shaft              | Lignite              | 267                      | 10                                | 7,809                            |
| Grant                         | .....St. Vrain Coal Co.           | .....Frederick                    | .....10 ft. 6 in.                              | Shaft              | Lignite              | 90                       | 34                                | 4,537                            |
| Russell                       | .....Russell Coal Co.             | .....Firestone                    | .....6 to 8 ft.                                | Shaft              | Lignite              | 194                      | 21                                | 4,186                            |
| Peerless                      | .....Peerless Coal Co.            | .....Frederick                    | .....3 ft. 6 in.                               | Shaft              | Lignite              | 208                      | 3                                 | 1,831                            |
| State                         | .....State Coal Co.               | .....Erie                         | .....11 ft.                                    | Shaft              | Lignite              | 93                       | 6                                 | 597                              |
| Last Dollar                   | .....Last Dollar Coal Co.         | .....Erie                         | .....  | Shaft              | Lignite              | 17                       | 3                                 | 55                               |
| Number of mines operated..... |                                   |                                   |  |                    |                      | 183.9                    | 558                               | 477,651                          |

Number of mines operated..... 14

TABLE 23

## PRODUCTION OF COUNTIES BY MONTHS

| Months      | Archuleta | Boulder | Delta  | El Paso | Fremont |
|-------------|-----------|---------|--------|---------|---------|
| Jan. ....   | 360       | 125,526 | 8,371  | 35,161  | 12,468  |
| Feb. ....   | 267       | 82,363  | 8,438  | 27,489  | 14,666  |
| Mar. ....   | 277       | 75,485  | 6,536  | 25,080  | 17,609  |
| Apr. ....   | 327       | 56,059  | 4,884  | 23,618  | 11,418  |
| May ....    | 184       | 50,525  | 5,724  | 19,099  | 8,380   |
| June ....   | 274       | 42,309  | 4,837  | 13,839  | 12,047  |
| July ....   | 138       | 53,623  | 5,237  | 14,282  | 11,448  |
| Aug. ....   | 184       | 88,367  | 7,308  | 17,165  | 13,419  |
| Sept. ....  | 80        | 91,057  | 7,980  | 20,200  | 16,152  |
| Oct. ....   | 189       | 100,400 | 8,169  | 24,533  | 18,573  |
| Nov. ....   | 201       | 98,258  | 8,831  | 25,235  | 16,139  |
| Dec. ....   | 130       | 129,730 | 20,758 | 37,441  | 21,164  |
| Totals..... | 2,611     | 993,702 | 97,073 | 283,142 | 173,483 |

| Months      | Garfield | Gunnison | Huerfano  | Jackson | Jefferson |
|-------------|----------|----------|-----------|---------|-----------|
| Jan. ....   | 5,760    | 30,396   | 127,562   | 5,954   | 18,042    |
| Feb. ....   | 8,578    | 30,108   | 102,862   | 6,162   | 12,624    |
| Mar. ....   | 11,183   | 31,457   | 110,886   | 2,334   | 11,423    |
| Apr. ....   | 6,999    | 31,307   | 93,664    | 2,211   | 10,650    |
| May ....    | 7,643    | 32,862   | 110,226   | 3,511   | 8,018     |
| June ....   | 8,327    | 38,502   | 129,364   | Idle    | 8,062     |
| July ....   | 8,533    | 32,378   | 137,443   | 3,014   | 8,504     |
| Aug. ....   | 11,594   | 32,026   | 159,689   | 2,828   | 11,904    |
| Sept. ....  | 12,105   | 34,722   | 169,318   | 5,100   | 12,202    |
| Oct. ....   | 12,961   | 40,431   | 184,581   | 4,134   | 14,761    |
| Nov. ....   | 11,877   | 36,582   | 178,587   | 3,791   | 14,025    |
| Dec. ....   | 12,437   | 32,732   | 182,394   | 6,730   | 17,699    |
| Totals..... | 117,994  | 403,503  | 1,686,606 | 45,769  | 141,914   |

TABLE 23—Concluded

## PRODUCTION OF COUNTIES BY MONTHS

| Months      | Las Animas | La Plata | Mesa    | Moffat | Monte-zuma |
|-------------|------------|----------|---------|--------|------------|
| Jan. ....   | 226,853    | 14,569   | 17,380  | ....   | 182        |
| Feb. ....   | 210,941    | 13,415   | 14,464  | ....   | 127        |
| Mar. ....   | 233,630    | 9,137    | 10,519  | ....   | 50         |
| Apr. ....   | 198,670    | 8,652    | 7,371   | ....   | 18         |
| May ....    | 216,110    | 9,392    | 12,429  | ....   | ....       |
| June ....   | 231,024    | 10,724   | 13,134  | ....   | ....       |
| July ....   | 228,119    | 10,094   | 12,469  | ....   | ....       |
| Aug. ....   | 240,281    | 10,632   | 12,334  | ....   | ....       |
| Sept. ....  | 250,638    | 12,087   | 13,858  | ....   | ....       |
| Oct. ....   | 261,382    | 13,729   | 19,281  | ....   | 37         |
| Nov. ....   | 232,229    | 11,250   | 12,166  | ....   | ....       |
| Dec. ....   | 226,407    | 11,832   | 12,862  | 300    | 573        |
| Totals..... | 2,756,284  | 135,513  | 158,267 | 300    | 987        |

| Months      | Pitkin | Routt   | Weld    | Total Tonnage |
|-------------|--------|---------|---------|---------------|
| Jan. ....   | 4,681  | 42,237  | 61,795  | 737,297       |
| Feb. ....   | 4,941  | 34,905  | 51,560  | 623,910       |
| Mar. ....   | 5,301  | 39,616  | 41,724  | 632,247       |
| Apr. ....   | 4,641  | 43,540  | 27,652  | 531,681       |
| May ....    | 5,001  | 42,348  | 20,848  | 552,300       |
| June ....   | 6,482  | 56,131  | 9,968   | 585,024       |
| July ....   | 6,016  | 54,970  | 16,300  | 602,568       |
| Aug. ....   | 6,001  | 58,837  | 39,576  | 712,142       |
| Sept. ....  | 5,340  | 61,735  | 47,252  | 759,856       |
| Oct. ....   | 6,060  | 73,186  | 40,295  | 819,702       |
| Nov. ....   | 5,630  | 73,282  | 47,151  | 772,234       |
| Dec. ....   | 10,652 | 75,091  | 73,530  | 872,462       |
| Totals..... | 70,746 | 655,878 | 477,651 | 8,201,423     |

TABLE 24

## SHOWING INCREASE AND DECREASE OF EACH COUNTY, 1913-1914

| County               | 1913      | 1914      | Increase | Decrease  |
|----------------------|-----------|-----------|----------|-----------|
| Archuleta .....      | 3,771     | 2,611     | .....    | 1,160     |
| Boulder .....        | 959,010   | 993,702   | 34,692   | .....     |
| Delta .....          | 80,786    | 97,073    | 16,287   | .....     |
| El Paso .....        | 331,861   | 283,142   | .....    | 48,719    |
| Fremont .....        | 531,833   | 173,483   | .....    | 358,350   |
| Garfield .....       | 168,027   | 117,994   | .....    | 50,033    |
| Gunnison .....       | 476,625   | 403,503   | .....    | 72,522    |
| Huerfano .....       | 1,644,212 | 1,686,606 | 42,394   | .....     |
| Jackson .....        | 62,905    | 45,769    | .....    | 17,136    |
| Jefferson .....      | 155,351   | 141,914   | .....    | 13,437    |
| La Plata .....       | 140,353   | 135,513   | .....    | 4,940     |
| Las Animas .....     | 3,782,340 | 2,756,284 | .....    | 1,026,056 |
| Mesa .....           | 127,034   | 158,267   | 31,233   | .....     |
| Moffat .....         | .....     | 300       | 300      | .....     |
| Montezuma .....      | 150       | 987       | 837      | .....     |
| Pitkin .....         | 52,216    | 70,746    | 17,530   | .....     |
| Routt .....          | 332,566   | 655,878   | 323,312  | .....     |
| Weld .....           | 419,399   | 477,651   | 58,252   | .....     |
| Totals.....          | 9,268,939 | 8,201,423 |          |           |
| Decrease, 1914 ..... |           |           |          | 1,067,516 |

TABLE 25

## COKE PRODUCTION IN 1914 BY COMPANIES AND COUNTIES

| Companies                   | Total No. |         | Counties        | Total No. |         |
|-----------------------------|-----------|---------|-----------------|-----------|---------|
|                             | Ovens     | Tonnage |                 | Ovens     | Tonnage |
| Colorado Fuel & Iron Co.... | 1,194     | 526,871 | Las Animas..... | 1,562     | 656,580 |
| Carbon Coal & Coke Co....   | 308       | 131,613 | La Plata .....  | 20        | 9,878   |
| Victor-American Fuel Co.... | 80        | 7,974   |                 |           |         |
| Totals.....                 | 1,582     | 666,458 |                 | 1,582     | 666,458 |



## NEW MINES

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During the year 1914, two new properties were opened up in Routt County. These were laid out on a basis of securing a large tonnage.

In June, 1914, the Colorado-Utah Coal Co. commenced developing the Harris mine situated about 17 miles West of Steamboat Springs and 7 miles East of Hayden, on the D. & S. L. R. R. Coal was struck in August. The vein under exploitation is the second of the middle series, called the Wadge Seam and is of the bituminous variety,  $8\frac{1}{2}$  feet thick and pitches nine degrees to the West. The mine has been opened on the Panel System.

The tippie is equipped for a 2,000 tons daily capacity. An Ottumwa fan 5' x 14' driven by a 10" x 16" steam engine, has been installed with a capacity of 135,000 cubic feet of air per minute set in a casing of No. 12 steel. Also a Litchfield Geared Tail Rope Engine 18" x 24", a No. 8 Cameron pump, 3 3-horse power gasoline pumps, one 6" x 8" direct single drum hoist, 2 80-horse power tubular boilers, 1 10-ton wagon scale, and 3 R. R. track scales have been installed.

The surface equipment is comprised of 3 5-room houses, 1 7-room house, 1 6-room house, 11 4-room houses, 9 2-room houses, 1 16-room boarding house, 1 school house, a store and office buildings and a reading room.

It is the intent of this Company to place both the mine and the camp on a modern and up-to-date basis.

The Bear River Coal Co. commenced developing the Bear River mine in the Spring of 1914. This property is located on the D. & S. L. R. R. about 18 miles West of Steamboat Springs.

The Company is working the Pinnacle seam of the Lower Series which is about  $10\frac{1}{2}$  feet thick and of the bituminous variety. It is a very clean coal and the analysis runs as follows:

|                       |       |
|-----------------------|-------|
| Fixed carbon .....    | 56.33 |
| Volatile matter ..... | 30.80 |
| Moisture .....        | 7.30  |
| Ash .....             | 5.57  |

The Company plans numerous improvements, and an up-to-date camp is laid out. A school house has been established, 19 houses for dwelling purposes have been built, also store building and boarding house.

All the property needs to stimulate its growth is an active market.

## REPORTS ON THE FATAL ACCIDENTS WHICH OCCURRED IN THE COAL MINES OF COLORADO DURING THE YEAR 1914

Wherever there is no shortage of timbers reported, it is assumed that there were a sufficient supply of props on hand to be used.

January 8—W. P. Anderson; American; driver; age, 46 years; married; two children; employed by the Rocky Mountain Fuel Company at Rex No. 1 Mine, Boulder County; was killed by being wedged in between car and rib. Deceased was hauling coal from parting to bottom of shaft; he had a loaded trip of several cars, each car on the low side had two sprags. Where the accident occurred, the grade was very slight in favor of the loads, but about 30 feet further South the grade is 3 per cent. There was no eye witness to the accident and the cause is not determined.

January 17—John Vinksel; Slav; miner; age, 22 years; single, and George Mocker, Austrian; miner; age 24 years; single; employed by the Victor-American Fuel Company at the Ravenwood Mine, Huerfano County, were killed by a blown-out shot. These men drilled a hole without mining any and fired their own shots in violation of the coal mining law and of the Rules of the Company who employ Shot-firers for that purpose.

January 20—William Adams; Negro; miner; age, 42 years; married; one child; employed by the Temple Fuel Company at the Kenneth Mine, Las Animas County; was killed by a fall of rock. Where deceased was working, draw slate was hanging back four feet from the coal and no props set under it, although there were three props at hand. Charles Holbert, partner, advised the deceased to set up props, but the latter replied that the rock was safe and then sounded the roof and said it was all right. However, it fell on deceased and resulted in instant death. From the evidence it is apparent that carelessness of deceased caused the accident.

January 27—King W. Basham; American; miner; age, 34 years; single; employed by the Dorr Coal Company at the Dorr Mine, El Paso County; was killed by a fall of rock in an entry which had been driven through old workings. At the point where deceased was killed there was a loose rock. It had been sounded and found loose, and William Fox, one of the men working with him, cautioned deceased not to work under it. The warning went unheeded and no props were set up to support the rock. The result was it fell and killed Basham.

January 27—H. M. Park; Korean; miner; age, 37 years; married; no children; employed by the Oakdale Coal Company at the Oakdale Mine, Huerfano County; was killed by a fall of top coal in room No. 2, off the ninth cross entry of the new mine. Deceased was digging coal off the rib and cut the coal to a slip that ran into a cleat, liberating the coal on all sides and falling on deceased. Had the deceased taken the coal down instead of working under it, the accident would have been avoided.

January 28—Mike Elhnott; Slav; driver; age, 22 years; single; employed by the Routt County Fuel Company at the Pin-nacle Mine, Routt County; was killed by being caught between cars. Deceased was making up his trip and had taken a car of coal from room 14. This car he took to three cars standing on the entry and while he was trying to couple it to the others he was caught between the cars which started forward and crushed him. From the evidence given, three sprags were in the car, and while there was a slight grade in favor of the loads it was not sufficient to allow a car to run any distance with three sprags in it.

January 30—Joe Busseto; Italian; miner; age, 31 years; married; two children; and Martin Gozeta (Yzaitia); Russian; miner; age, 26 years; single; employed by the Colorado Central Coal and Mining Company at the Central Mine, Fremont County, were drowned by a rush of water. These men were breaking through the face of the drift into the air shaft which contained 150 or 200 feet of water. The testimony showed that Section 66 was violated. The management claimed that two bore holes were carried in advance, but were sure that one hole only was 12 feet deep. On account of the caved condition of the approach to the airshaft, we have been unable to reach the point where connections were made to determine whether or not bore holes were carried in advance of the face as prescribed by law.

January 30—Abel Silva; Mexican; miner; age 48 years; married; seven children; employed by the Colorado Fuel & Iron Company at the Frederick Mine, Las Animas County; was killed by a fall of rock in pillar of room No. 17 off E entry. The rails were turned into the pillar and the distance between the props was 6 feet to allow room on each side of the car. Along the props on the gob side ran a clay slip in the roof, and while deceased was loading the car at the front end, a rock had fallen from the clay slip on the gob side breaking off along the props near the coal face and caught deceased, crushing him to death. Timbers should have been set under this rock when the clay slip became visible. The deceased had five years' experience in mining.

February 4—James Albert; Austrian; miner; age 31; single; employed by The Colorado Fuel & Iron Company at the Berwind No. 3 Mine, Las Animas County; was killed by a fall of rock in room No. 4 off the third plane off the first left entry. In the morning deceased and his partner had been told by the mine foreman to set up props under a rock that he found loose. However, by 2 p. m. of the same day, props had not been set up and while working under it, the fall occurred resulting in instant death. Deceased had two months' experience in mining.

February 6—John Sebben; Italian; timberman; age, 27 years; married; one child; employed by The Colorado Fuel & Iron Company at the Sopris Mine, Las Animas County; was crushed to death under an electric locomotive on the main double parting. It is believed deceased came in contact with the electric trolley wire and received a shock which knocked him down on the track. The electric headlight on the locomotive had burned out on the previous trip and had not been replaced, so that the motorman could not see him. Deceased had gone to get water from the trough to mix concrete for a motor pit. This trough is at the side of the loaded track, the trolley wire being five feet three inches above the rail, thirty inches higher than the top of the water trough and nine inches to the inside of it. Sebben had had nine months' experience in this mine.

February 18—William Paton; Scotch; machine helper; age, 27 years; married; three children; employed by the Colorado Fuel & Iron Company at the Walsen Mine, Huerfano County; was killed by coming in contact with an electric coal cutting machine while it was in motion. The accident could have been avoided had the machine cutter and deceased taken proper precaution to set the rear jack against the roof. Instead, it was placed close to a slip in the roof that was well defined with the result that the rear jack fell and Paton trying to avoid the falling jack slipped and was caught by the machine causing such injuries that he died the following day.

February 21—Felix German; Negro; driver; age, 35 years; single; employed by the Colorado Fuel & Iron Company at the Robinson Mine, Huerfano County; was killed by a fall of rock. Deceased delivered a car to the miners on the fifth cross off the first N. chain pillar and then went to the sixth, a distance of 75 feet, where Antonio Pedrosa was working; 15 inches of the roof along the road had been shot down for height; Pedrosa had taken the coal out from under the rock that projected about 3 feet and he did not secure it with timber. It appears that both deceased and Pedrosa were sitting under it when it fell, killing German and seriously wounding Pedrosa. The latter had received orders the day



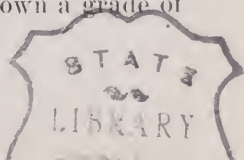
before from the Assistant Mine Foreman to timber the place. On the day of the accident at 10:30 a. m. he had not gotten around to this place. The death was caused by the assistant mine foreman in not having his orders of the previous day carried out.

February 21—B. Ishida; Japanese; miner; age, 44 years; married; no children; employed by the Southern Colorado Coal Company at Brodhead No. 9 Mine, Las Animas County; was killed by a fall of rock. Deceased was cleaning up the rock along the fifth dip. A rock was overhanging the entrance to room No. 4. A cleat ran across the neck of the room road 4 feet from the line of entry rib, so that it was apparent this was not a safe rock to work under. The Mine Foreman had instructed deceased through Frank Iwata, the Jap boss, to take down all the loose rock. The Jap boss failed to see that the order was carried out.

February 24—John Robak; Spaniard; timberman; age, 27 years; single; employed by the Victor-American Fuel Company at the Hastings Mine, Las Animas County; was electrocuted. Deceased was timbering the air course, and found some glass knobs which fastened the electric wires were in the way when he was loading a car with rock. He knocked them off with a sledge and cut the insulation off the electric wire; his hands coming in contact with the bare wire resulted in death. Deceased had been warned to be careful of the wires, but he replied that he had run electric pumps and electric machinery.

February 25—Charles H. Werden; American; stable boss; age, 38 years; married; four children; employed by the Colorado Fuel & Iron Company at the Cameron Mine, Huerfano County; was killed by a run-away trip of cars. Werden went into the mine to make arrangements for the exchanging of several mules. After completing his business he got on the trip of cars that was ascending the slope of the Walsen vein; upon reaching the apex of the slope it dipped to the Cameron seam. A tail-rope system of haulage is used. When the trip started to descend on the Cameron side the clevis of the tail rope broke, causing the trip to runaway. Werden leaped from between the cars to save himself, but he fell under the cars and received injuries which resulted in his death. The course Werden pursued to leave the mine was in violation of Sections 57 and 88.

March 5—Gaetano La Lama; Italian; leveler at Coke ovens; age, 21 years; single; employed by the Colorado Fuel & Iron Company at the Segundo ovens, Las Animas County; was killed by being crushed under a larry car. Deceased had gone up on top of the ovens, his purpose not known, and was riding down a larry car with the charger, who runs it. They allowed the car to run at a high rate of speed down a grade of



1½ a distance of 1,750 feet to the end of the battery of coke ovens. The charger endeavored to stop the car, but failed, and it rushed over the ends of the rails falling over the ends of the ovens to the ground, slightly hurting the charger, who jumped to one side, but deceased was caught under the car, crushing his head, causing instant death. Deceased had no business on the car as he was employed as a leveler at the ovens. This is a surface accident.

March 5—John Lynch; Irish; miner; age, 51 years; single; employed by the Colorado Fuel & Iron Company at the Morley mine, Las Animas County; was killed by a fall of rock in room 85 off the second E. air course. Deceased was breaking the pillar of this room. Draw slate comes in between the coal and main roof; this was brushed down along the roadway and deceased was taking down the draw slate as he came back with the pillar. At the point where the accident occurred, the draw slate inclined to stick to the main roof and sounded safe. According to his partner, Arthur Holden, the deceased intended to put a prop under it in the morning before starting to work. Had he done this or taken the rock down the accident would have been avoided.

March 7—Frank Goetz; German; rockman; age, 51 years; widower; two children; employed by the Royal Fuel Company at the Royal Mine, Las Animas County; was crushed to death between two empty cars at a point 30 feet back from the face of the rock tunneled at the bottom of the new slope. About 340 feet from the face of the slope the trip runner had left a trip of three empty cars, the deceased had taken one of them and had taken it within 25 feet of the face of the slope. It seems that when he took the car, he placed only a small block or chip in front of the remaining cars, instead of the tie used as a block to prevent cars from running away. The trip runner came down with another trip of cars and bumped into the two empty cars starting them and deceased was overtaken by them after he had passed the empty car he had brought down to the face of the slope.

March 9—Liermo Martinez; Mexican; machine helper; age, 27 years; married; one child; employed by the Breen Coal Mining Company at the Breen Mine, Huerfano County; was killed by coming in contact with the bits of a Jeffrey electric coal cutter while in motion. Deceased was engaged in securing the jacks for holding the machine to its works; he placed his left foot too close to the bits of the machine, causing injuries from which he died four hours later. From information obtained deceased was not experienced in underground work.

March 18—Gabriel Schmucker; Hungarian; miner; age, 40 years; married; four children; employed by the Yampa Valley Coal Company at the Yampa Valley No. 2 Mine, Routt County;

was killed by a fall of rock. This accident was due to carelessness on part of the Mine Foreman who did not see that the working place where deceased was working, was properly timbered; also permitted deceased to work at hours not in the regular shift, although he had forbidden him to do so. About 30 minutes before accident deceased had fired a shot in the coal which it is claimed knocked out the prop from under the roof, and while loading a car the fall occurred, resulting in his death.

March 25—Salvator Bottaru; Italian; miner; age, 24 years; single; employed by the Victor-American Fuel Company at the Delagua Mine, Las Animas County; was killed by a fall of slate. Deceased and his partner, Pete Codan, were working at the face of their room and they tried to pull down some loose slate, but it did not come down readily, so they commenced working without setting props, and when the slate fell it resulted as above stated. Jack Logger was employed to see that the miners kept their places in a safe condition, and he knew that the rock was not safe and he should have made deceased put up props to secure it.

April 11—Luis Esposito; Spaniard; miner; age, 23 years; single; employed by the Colorado Fuel & Iron Company at the Frederick mine, Las Animas County; was killed by a fall of rock in room No. 13 off the thirteenth W. entry, off the main drift. Deceased was in front of the roadway taking away the coal when a piece of rock 10 feet long, 8 feet wide and 14 inches thick fell on him, causing instant death. His partner states they did not know this rock was loose, although there was a slip, however, had they taken the precaution of setting up two props inside of this slip the accident would have been avoided.

April 14—Mike Novak (Frank Ostrowski); Pole; miner; age, 42 years; married; four children; employed by the Victor-American Fuel Company at the Delagua Mine, Las Animas County; crushed to death between car and coal face. Deceased and his partner, Alex Sasmick, were working in the dip room. They had been using a prop across the rails to prevent the car from running over the ends of the rails, but on this day they used a cap piece. A piece of coal struck the cap piece, releasing the car, which ran away and caught deceased between the face and the car. The Mine Foreman had instructed deceased and his partner to use a tie across the rails and another tie laid across the first tie at right angle; the Assistant Mine Foreman stated that he had shown the men how to put the ties down. Had they obeyed instructions the accident would have been avoided.

April 29—Ambroggio Minoggio; Italian; miner; age, 26 years; single; employed by the Calumet Fuel Company at the Perin's Peak Mine, La Plata County; was killed by a fall of rock.

He was working in pillar 18 off back main entry. The Mine Foreman was in the place about an hour before the accident occurred and he found that the pillar was practically taken out to the crosscut, only a small stump remaining. He ordered Minoggio to stop work on the stump and to start the pillar from the next crosscut outby. The deceased went to work instead on the small stump of pillar 19, which was pretty well crushed, and started to take the coal out, when it caved suddenly and caught him, causing death. The deceased disregarded orders by the Mine Foreman, for work was clear of the fall. Had the deceased obeyed the Foreman's instructions, the accident would not have occurred.

May 8—John Saris; Greek; miner; age, 22 years; single; employed by the Colorado Fuel & Iron Company, at the Floresta Mine, Gunnison County; was killed by a fall of rock in room 8 off "A" West entry. Saris was in the act of replacing a timber that had been displaced by the coal from a shot. Before he could get the timber in position the rock fell upon him, causing his death. There was no eye witness to the accident.

May 8—James Brown; American; miner; age 29 years; married; one child; employed by the Fox Coal Mining Company at the Fox Mine, Boulder County, was injured by a fall of coal in room 2, Dunn entry, and died May 17 at the University Hospital, Boulder. Brown was on his knees mining at a shot which had been fired the night before. The coal was loose, but adhering to bottom of the South corner of the shot, and while he was working, the fall occurred which so seriously injured him as to result in death.

May 15—Allan D. House; American; rope rider; age, 25 years; single; employed by the Moffat Coal Company at the Oak Hills No. 1 Mine, Routt County; was killed opposite sixth level on main slope by a runaway of three empty cars. Deceased was riding a trip of 15 empty cars on his way down to the eighth level when in some manner the three cars ran away from the tippie and overtaking deceased wedged him in between the cars, causing instant death.

May 18—Sam Ramond; Italian; timberman; age, 40 years; single; employed by the Colorado Fuel & Iron Company at the Berwind No. 3 Mine, Las Animas County; was injured by a runaway trip and died at the Minnequa Hospital on the 21st. Deceased and his partner had loaded a car with rock from a fall at the Junction of the 18th E. entry and the 4th S. dip entry, dipping about 4 per cent. The nipper of the motor had lowered three loaded cars of coal down to the point on the 4th S. where the loaded car of rock was standing. Hitching the car of rock to the others, the pin of the chain attached to the front car pulled out and when it had gone about 20 feet from the rock fall and where deceased



was standing, the cars became loose from the rope and no drag being attached to the rear end of the last car of the trip, it ran back down the slope catching deceased and crushing him. Deceased was careless in standing on the slope behind the ascending trip, especially as there was no drag attached to the rear car of the trip to prevent it from running back. Deceased had five years' experience in mining of coal.

May 22—Mike Burnes; Irish; miner; age, 55 years; widower; no children; employed by the Rocky Mountain Fuel Company at the Alpine Mine, Gunnison County; was killed by a fall of rock. The Superintendent of the mine had visited the place at 10 a. m. prior to the accident and examined the roof with a pick to detect if there was any loose rock. The place was well timbered. The deceased was working alone. At 3 p. m. the Mine Foreman found Burns lying dead, a large rock by his side. It had fallen from a pot in the roof.

May 26—George Strong; English; machine runner; age, 34 years; married; one child; employed by the Victor-American Fuel Company at the Radiant Mine, Fremont County; was killed by coming in contact with the bits of a coal cutter. Deceased was in the act of sumping the machine into a corner, the cutter bar recoiled sideways and caught him, and as it was in motion it mutilated him so that he died almost instantly from the effects. From evidence it seems the machine was not properly set up. It was anchored by one jack when there should have been two jacks to hold the machine and prevent it from recoiling, or it may have been that deceased failed to set back the jack which held the machine.

June 6—Diego Godinez; Mexican; miner; age, 25 years; married; no children; employed by the Colorado Fuel & Iron Company at the Lester Mine, Huerfano County; was injured by a collision with mine cars; died from the results on June 11. The evidence shows that Godinez brought his car out on the switch to permit the cars on the entry to clear it. While he was at the switch a mixed trip of loaded and empty cars came up the entry, the front end of which came in contact with Godinez's car, derailing it and swinging it around, crushing Godinez between the trip and the derailed car. He had three and one-half years' experience as a miner.

June 16—Joseph Selonzek; Russian Pole; miner; age, 34 years; married; two children; employed by the Rocky Mountain Fuel Company at the Industrial Mine, Boulder County; was killed by a piece of top coal falling on him. The place in which deceased was working was well timbered, he and his partner were taking out coal up to the roof. They had already taken out the bottom coal leaving the top coal hanging with nothing to support it, either in the shape of a sprag or prop. The consequence was, a piece of this coal weighing two tons or more, fell from face of roof. The accident could

have been avoided if care had been taken to secure the top coal.

June 23—Mike Marcinko; Austrian; driver; age, 38 years; married; four children; employed by the Colorado Fuel & Iron Company at its Walsen Mine, Huerfano County; was killed by moving mine cars. Deceased was bringing out a trip of twelve loaded cars which was derailed at a point near the 4th crosscut in the 6th West entry. He was riding the front end when the mules slackened speed and the trip was derailed by a tail chain catching under the wheels of the front car, causing him to fall off. He received such injuries that he died an hour later. Deceased stated before his death that some persons caused his team to shy. He had had 15 years' experience as driver. The track layers were repairing a joint about 15 or 20 feet from where the accident occurred.

June 28—Matt Schmitz; German; Shotfirer; age 48 years; single; employed by the Royal Fuel Company at the Royal Mine, Las Animas County; was burned to death caused by an explosion of firedamp in room No. 2 of the 1st N. entry off the 4th W. dip. Deceased found a body of firedamp which had put out the light of his safety lamp. He came back about 50 feet from the point where the light was extinguished to relight his lamp, and in so doing set off the gas. The accumulation was due to door on main slope having been left open by some one.

July 1—A. Gonzales; Mexican; miner; age, 30 years; married; five children; employed by the Colorado Fuel & Iron Company at the Tercio Mine, Las Animas County; was killed by a fall of coal in room No. 90 off the main drift A seam No. 2 Mine. While mining coal a piece of it, 9 feet long, 21½ feet thick and 15 feet wide, broke from the top coal with such force on the deceased that it caused almost instant death. His partner had told him not to mine coal at that place any more. There appeared to have been a dry slip in the coal near the left rib which may have caused the coal to become loose. Had the deceased spragged his coal the accident would have been avoided. He had ten years' experience in coal mining.

July 2—Asper Amato; Italian; miner; age, 27 years; single; employed by the Colorado Fuel & Iron Company at the Tabasco, Las Animas County; was killed by a fall of rock in room 4 of the third plane of the second S. entry. Walter Kerr, rope runner on the third plane, stated that he was waiting on a trip and that he went in the above stated room to get another loaded car and in doing so the rear end of the car knocked out a prop from under a rock along the rails near the coal face. Deceased failed to reset the prop and started to load the next car; while thus engaged the rock fell on deceased and killed him almost instantly. Deceased should have reset the prop before continuing his work.

- July 16—Walter Johnston; American; miner; age, 30 years; single; employed by Hanby & Ames, at the Hanby Mine, Jackson County; was killed by a fall of dirt and rock in the slope. The roof of slope is tender and saturated with water; at the time of the accident deceased and his partner were putting up lagging about 5 feet back from the face of the slope, when a cave-in of dirt and rock occurred, breaking a couple of crossbars and covering both men. L. W. Evans, the partner, was liberated at once, but it took three hours to recover Johnston's body. The accident could have been avoided if the slope had been properly timbered.
- July 17—Georgio Degiorgis; Italian; age, 42 years; married; two children; employed by the Porter Fuel Company at the Hesperus Mine, La Plata County; was killed by a fall of coal. He was undermining coal and had placed a short sprag under it to protect himself, but the coal gave away from the top where there was a slip. It is evident that the deceased should have used a longer sprag instead of the short one; he would have protected himself more effectively.
- July 23—Tony Perkovich; Slavonian; was found dead in the Primero Mine, operated by the Colorado Fuel & Iron Company in Las Animas County. His death was due to natural causes. A post-mortem examination was made by Dr. Howard of Trinidad and the jury's verdict rendered at the inquest was made on the examination and is as follows: "From an attack of acute appendicitis following an attack of acute indigestion." This death not charged to the company.
- July 24—Calavanto Pio; Italian; miner; age, 37 years; married; two children; employed by the Victor-American Fuel Company at the Hastings Mine, Las Animas County; was killed by a fall of rock. The place where deceased was working was well timbered and the accident was unavoidable, being caused by an unseen slip in the roof.
- July 25—Anton Segato; Italian; miner; age, 31 years; single; employed by the Colorado Fuel & Iron Company at the Sopris Mine, Las Animas County; was electrocuted. Deceased was employed in the old mine, but went into the new mine to get some drinking water. He came in contact with the electric wires carrying 440 volts alternating current. The insulation was in good condition, but it is apparent that insulated wires are of very little protection against being electrocuted in wet mines. This accident is not charged to the company, as deceased was not an employee of this mine and had no business in there.
- July 27—Joseph Martinez; Mexican; tracklayer; age, 33 years; married; two children; employed by the Victor-American Fuel Company at the Ravenwood Mine, Huerfano County; was killed by being run over by a loaded car. The regular trapper was absent and deceased was sent to act in his place.

It seems that he fell asleep at his post; a Japanese miner saw him lying asleep on the track; he spoke to him, but got no answer. About five minutes later a trip came along, the mule opened the door and the trip ran over deceased.

July 27—Frank Elleff; Macedonian; miner; age, 24 years; married; no children; employed by the Routt County Fuel Company at the Pinnacle No. 2 Mine, Routt County; was injured by a fall of coal from delayed shot and died August 1. A shot was lighted that hung fire, and deceased went to examine the results of the shots. This accident could have been avoided if Section 159 of the Coal Mining Law had been complied with. The Shotfirer was extremely negligent in firing shots when he knew men were in the mine.

August 8—Angelo Sebben; Italian; miner; age, 34 years; married; three children; employed by the Colorado Fuel & Iron Company at the Sopris Mine, Las Animas County; was killed by a fall of rock in room 13 off 22nd E. entry off the main drift. Deceased was working alone. It seems it is the custom at this mine to leave a part of the coal at the loose end and next to the road unmined until the side of the room has been mined and spragged. Deceased was following this rule, but after all the coal was mined, deceased went up close to the tight rib where a hole was drilled into the coal to make the mining deeper under the hole. He was found by the Mine Foreman 2 feet from the rib under the coal after all the men had left the mine. There was one sprag against the coal. Top of this sprag was 10 inches from the roof. This sprag was still standing holding up a piece of coal. Deceased should not have gone under the coal after it was mined through to the loose end until short sprags were put under the coal to make it safe.

August 12—Pedro Alvarez; Mexican; age, 40 years; single; employed by the Routt County Fuel Company at Pinnacle Mine, Routt County; was injured by a fall of loose coal and rock and died August 14. It seems that deceased was picking some loose coal down to make room to set his machine to drill a hole when the accident occurred. Deceased had worked in coal mines about 20 years.

August 12—William Harris; Irish; miner; age, 46 years; married, and seven children; employed by the Moffat Coal Company at the Oak Hills No. 2, Routt County; was injured by a fall of coal and died at the Steamboat Springs Hospital August 15. Deceased had tried to take down a piece of coal which he thought loose, but not succeeding, he let it go and started to work under it. He set his machine and was drilling a hole when it fell. He worked in coal mines three years.

August 14—Brigidio Rodriguez; Mexican; miner and Shotfirer; age, 32 years; single; employed by the Colorado Fuel & Iron Company at the Ideal Mine, Huerfano County; was killed by



an explosion of giant caps. Deceased came to the mouth of the drift and asked the boy who gave out the identification checks for more giant caps and he received six. Deceased stated that he had about 14 caps in a tin box before getting the six additional ones. He lighted his lamp and when he reached a point about 117 feet from the mouth of the drift an explosion occurred. Deceased stated that a spark from his lamp fell into one of the caps and caused the explosion of the other caps. Carelessness on the part of deceased was the cause of his death. He was not a Certified Shotfirer.

August 27—Reuben W. Bowen; American; miner; age, 27 years; married; no children; employed by the Leyden Coal Company at the Leyden No. 2 Mine, Jefferson County; was killed by a fall of rock in room No. 2 off A. entry. Deceased was engaged in taking out a pillar. The place had been examined four hours prior to the accident and reported in good condition, being timbered up to within  $2\frac{1}{2}$  feet of the face. This accident is classed as an unavoidable one, the rock falling in the form of a pot hole which was concealed by 4 inches of coal left next the roof.

August 28—J. Ornelus; Mexican; miner; age, 27 years; not known to have wife or children; employed by the Wootton Land & Fuel Company at the Turner Mine, Las Animas County; was killed by a fall of rock. On the day of the accident the roof in the pillar of room No. 6 off the 2nd right entry caved about 10 a. m., and deceased had gone back to work there. At 1 p. m. Andrew Boldin, Fireboss, went in to see how deceased was getting along. Boldin stated that he pulled back deceased's car to the entry switch, and told him to set up props where he was working to make it safe. He then went out the entry to get the mule to pull out the loaded car. When about 70 feet from the deceased he heard the rock fall. He rushed back and found deceased under the rock, which was so large he could not lift it off the deceased, and had to send for aid. Had deceased set up props as directed by Boldin the accident would have been avoided.

August 29—Charles Russell; Negro; mule driver; age, —; married; no children; employed by the Chicosa Fuel Company at the Forbes No. 9 Mine, Las Animas County; was crushed to death between a loaded car and pillar. It is apparent he was caught sidewise. At a certain point he got off to put in a sprag, but he got off on the wrong side and was caught between the car and the pillar. Had the deceased been careful the accident would have been avoided.

September 2—Mack Jackson; Negro; age, 59 years; widower; one child; employed by the Colorado Fuel & Iron Company at the Berwind No. 3 Mine, Las Animas County; was killed by a fall of rock in the pillar below the air course off the 1st left off the slope. The place was well timbered, but a piece

of draw slate was allowed to hang over the coal. A few minutes before the accident, Sam Bennett, deceased's partner, heard the rock breaking and told the deceased to come away, but he stayed a minute or so when the rock fell on him, causing such injuries that he died eight hours after. Had deceased taken his partner's advice and jumped back quicker he would have been saved. He was an old miner.

September 25—Charles F. Williams; Negro; laborer; age, 35 years; single; employed by the Routt County Fuel Company at the Pinnacle Mine, Routt County; was killed by being thrown off a moving trip of cars on the tramway. Deceased was riding empty trip up to the derail on the tram. The trip he was riding had ascended the tram about 150 feet; when trip became uncoupled, resulting as above stated. It would seem deceased had not properly coupled the cars. From testimony it appears he had been instructed how to couple the trip and fasten the safety rope to it.

October 5—Bovie Lilloff; Bulgarian; loader; age, 30 years; married; number of children unknown; employed by the Rocky Mountain Fuel Company at the Gorham Mine, Boulder County; was killed by a fall of coal. Deceased was standing against a post watching his partner, Lligan Razinoff, pulling down some loose coal left standing from a shot fired the day before. Failing to get out of the way quick enough, he was caught between the prop and falling coal. Razinoff stated he advised deceased to get back out of the way, but the warning was unheeded.

October 7—Mike Murredu; Italian; timberman; age, 35 years; single; employed by the Victor-American Fuel Company at the Delagua Mine, Las Animas County; was killed by a fall of rock. Deceased was retimbering an entry which had been idle for some time; the old timber was not considered strong enough to hold the overlying rock. The Mine Foreman visited him regularly and instructed him what to do. He was ordered to place a set of timbers between a set that had broken and the next set in-by. While he was preparing to put the timbers up, the rock fell. The set of timber that broke was very rotten, but was deemed by the Mine Foreman, Carr Robinson, strong enough to sustain the weight of rock until the new set was put in. Therefore, the accident was caused by a false estimate of the weight of the rock and the strength of the timber.

October 10—George Rasso; Slavonian; miner; age, 25 years; married; three children; employed by the Primrose Coal Company at the Primrose Mine, Las Animas County; was injured by a fall of top coal from the effects of which he died November 8. At the point where deceased was injured the coal is 41½ feet high, and there is a parting in the coal about 8 inches from the roof. This coal is called top coal. About

two feet of this coal was hanging over and a part of it fell on deceased. Deceased should have taken down the coal.

October 14—David Miller; Scotch; Mine Foreman; age, 59 years; married; seven children; employed by the Momment Valley Coal Company at the Larimore Mine, Huerfano County; was killed by a fall of rock. Deceased went to assist Gus Swanson who was breaking up and gobbing a shot of brushing that had been fired the previous night, and while thus engaged a piece of the brushing fell on deceased, crushing him against the rock they were trying to break. The rock that fell was a part of the brushing and was partly released by the shot. The deceased deemed it safe. Had the rock been taken down, or properly propped, when it was found that they could not take it down, the accident would have been avoided.

October 17—W. J. Walker; English; lineman; age, 34 years; married; two children; employed by the Colorado Fuel & Iron Company at the Berwind No. 3 Mine, Las Animas County; came to his death by electrocution by coming in contact with a trolley wire at a point opposite the 14th E. entry on the 6th N. entry. At this point deceased was changing the telephone station in by to the double parting when the main trip came along and the trip stopped to allow deceased to get on, while in the act of climbing in his head came in contact with a live wire on the opposite side of which he was standing. He received a shock that killed him. Deceased was an efficient lineman but his death was caused by his own carelessness.

October 25—Frank Swanberg; German; miner; age, 46 years; married; six children; employed by the National Fuel Company at the Monarch No. 2 Mine, Boulder County; died from a hemorrhage of the lungs. This death is not due to any accident, and is a natural death, not charged to the Company.

October 28—Charles H. Smith; American; laborer; age, 45 years; single; employed by the Pikeview Coal Company in El Paso County; was injured by falling off the cage and died at the Glockner Sanitarium on November 27. Deceased tried to get on the cage after he had given the signal for the engineer to hoist the cage, Smith made a grab for his dinner bucket which he had left down, the bucket tumbled over at his attempt to get it and while reaching for it with one foot on the cage, which was ascending when the cage was up about six feet, he fell off, landing at bottom of shaft and from there into the sump, landing on top of block of wood on which the cage rests, causing the injuries which resulted in his death.

October 29—Sam Papas; Greek; miner; age, 38 years; married; one child; employed by the Cedar Hill Coal & Coke Company at the Greenville Mine, Las Animas County; was killed by a fall of rock behind the drift pillar near the 11th East entry off the main drift. Deceased was working on the entry pillar



300 feet away from the point where he was killed. For some unknown reason he went into this place, probably to hide his ax which was found beside him. Deceased had no business in this part of the mine as the rails were taken out and the place abandoned.

October 31—Rudolph Nilas; Hungarian; miner; age, 32 years; single; employed by the Oakdale Coal Company at the Oakdale Mine, Huerfano County; was killed by a fall of rock in the 2nd North entry pillar. Deceased was timbering and had placed two props and then removed one that was broken when the overlying coal and rock came down upon him. It took one hour to get Nilas out from under the mass of rock and coal.

November 2—Mike Sporakis; Greek; miner; age, 23 years; single; employed by the Colorado Fuel & Iron Company at the Walzen Mine, Huerfano County; was killed by a fall of rock in room 22 off the 7th cross entry off the 6th W. entry off the slope. At 9 a. m. the day of the accident, the Assistant Mine Foreman visited the place and told the deceased and his partner to put up a set of timbers under a rock where a slip was visible crossing the roadway near the face of the coal. This they failed to do and the result was that a piece of rock fell on deceased killing him instantly. The place was not well timbered and one set should have been set as directed.

November 3—Jose Cortez; Mexican; miner; age, 22 years; single; employed by the Colorado Fuel & Iron Company at the Lester Mine, Huerfano County; was killed by being crushed between two loaded cars. Deceased and his partner were taking down their loaded car from room 6 and the car came to the switch of No. 7 room it jumped the track. While they were trying to place the car on the track again, they heard the car coming from room 5. Sam Zorich, deceased's partner, told latter to get out of the way. Deceased being unable to get to a point of safety was caught between the two loaded cars and was crushed so that he died on the way to the Hospital at Pueblo the same day of the accident.

November 9—John Gresham; American; driver; age, 31 years; single; employed by the Rocky Mountain Fuel Company at the Simpson Mine, Boulder County; was injured by a run-away mule and died November 12 at St. Joseph's Hospital, Denver. Deceased and C. E. Dollar were coming down No. 71 entry with a mule. Deceased was leading him and Dollar was behind holding the tail chain. The mule rubbed against the roof causing him to run away a distance of 45 feet, then he turned and came back. In returning he struck deceased's head against the rib or rail, resulting as above stated.

November 14—Louis Furlong; Tyrolese; driver; age, 26 years; married; one child; employed by the Victor-American Fuel Company at the Chandler Mine, Fremont County; was killed

in a collision with a trip of empty cars. Deceased and others were walking up the slope after being warned that another trip was to be made. They were up about 400 feet when the trip overtook them, the trip collided with the mule that the driver was bringing out. Furlong was following in the wake of the mule and was also struck by the car and crushed into the rib of the slope. The accident could have been avoided had the men taken the manway instead of the slope, and as they were told to do. The manway was in good condition.

November 18—Peter Provloff; Bulgarian; loader; age, 46 years; married; three children; employed by the Sunnyside Coal Mining Company at the Sunnyside Mine, Huerfano County; was killed by a fall of rock. Deceased was loading coal after a machine at the point where the rock fell, the Mine Foreman had marked the roof for another prop to be set up, but deceased failed to set it up, and the one prop under it was swung or driven out as the rock gave way and fell on deceased.

November 18—J. A. Johnston; American; machine helper; age, 30 years; married; two children; employed by the Brooks-Harrison Fuel Company at the Nonpareil Mine, Boulder County; was killed by a fall of coal. The roof had been inspected about 15 minutes prior to the accident and it showed no signs of being in a dangerous condition. Deceased at time of accident was on his knees shoveling the coal cuttings away from the machine when a piece of coal from the roof fell on him, killing him instantly. The props where accident occurred were ten feet from the face, except one prop which was six feet from face and  $2\frac{1}{2}$  feet from the East rib, and this was the point where the accident occurred.

November 19—Sam Sudor; Slav; miner; age, 23 years; married; no children; employed by the Rugby Fuel Company at the Rugby Mine, Huerfano County; was killed by a fall of rock. Deceased was mining a stump getting ready to abandon the place, when a rock fell. The investigation showed that props should have been set closer to the coal face and side of pillar. The Mine Foreman, who visited the place at 7:30 a. m., advised caution in taking out the coal. The accident occurred at 11 a. m.

November 20—James Hanlin; American; miner; age, 28; single; employed by the Hayden Bros. Coal Corporation at the Juniper Mine, Routt County; was killed by a fall of rock in the 1st South entry pillar. Deceased knew some time before that the rock was dangerous and he was in the act of making a place to put up a prop under it when it fell. This accident could have been avoided if proper care had been exercised in either taking down the rock or by securing it with timber.

November 21—George Chinchierick; Austrian; machine helper; age, 23 years; single; employed by the Colorado Central Coal & Mining Company at the Central Mine, Fremont County; was instantly killed by coming into contact with electric power line on main entry. The day's work was done, deceased had cut off the power by taking the nibs off the power line. He found that the machine man had not completed sidetracking the machine, he went back to put the power on again. It appears that in making the second connection he got the shock that caused his death. He was found with one nib in his bare hand and the ground wet around him which caused the shock.

November 23—James Cockran; English; teamster; age, 55 years; married; two children; employed by the Colorado Fuel & Iron Company at the Rockvale Camp; was killed by being run over by a wagon. Deceased was unloading timber near the shaft of the Rockvale Mine, and when he was done he got down and in doing so he placed his foot on the doubletree and fell against one of the mules. In moving forward the front wheels passed over his neck and the rear over his chest. Death was almost instantaneous. It seemed to writer of the report that deceased should have been more careful in getting down off the wagon. This was a surface accident. The mine had been idle since September, 1913.

November 26—Edmund Lewis; Welsh; machine helper; age, 26 years; single; employed by the Gordon Coal Company at the Gordon Mine, Huerfano County; was electrocuted by a shock received from the electric power wires. He was connecting the mining machine cable with the main power cable wires. He must have formed a contact with the electric power producing the shock, resulting in his death. The point where deceased was found was a little wet. It would seem that deceased should have been more careful in making the connections, as below the three clips the power wires were well insulated.

December 3—Charles Cowan, Sr.; Scotch; Owner and Superintendent; age, 73 years; married; seven children; charge of the Black Diamond Mine, Delta County; was killed by being precipitated off a trestle to a depth of 50 feet. Deceased was riding up on a trip of empty cars, when the cable in swinging back and forth was caught under the ties and before the drum operator received the signal to stop the trip of cars with Mr. Cowan was plunged into the gulch. Mr. Cowan would not permit any of his employes to ride on the plane, but it is evident he took a chance himself.

December 8—H. H. Winn; American; Assistant hoisting engineer; age, 32 years; married; two children; employed by the Colorado Fuel & Iron Company at the Morley Mine, Las Animas County; was killed by a runaway loaded trip of cars.

Deceased was learning to be hoisting engineer on one of the incline planes and the accident occurred on his second day in the mine. He had taken the rope off a loaded trip to attach it to an empty trip at the bottom of the 7th plane off the 4th right entry, and according to his own statement the loaded cars were not let down far enough on the entry to allow the empty cars to ascend the plane. After taking off the rope from the loaded trip he started it and then trying to stop it by putting on the brakes, he fell in some way between the 3rd and 4th car, the latter running over him, causing such injuries that he died 7 hours later.

December 23—Nick Pappas; Greek; miner; age, 38 years; single; employed by the Fox Coal Mining Company at the Fox Mine, Boulder County; was killed by a fall of top coal in room No. 4 off room 24 off 1st S. E. Pappas' death was caused by his own negligence in not timbering the loose coal under which he was working. He had worked in mines for ten years, and at this mine the last three winters.

December 31—Lonnie Shaw; Negro; miner; age, 20 years; single; employed by the Victor-American Fuel Company at the Hastings Mine, Las Animas County; was killed by a fall of coal and slate. Deceased tried to pull down the draw slate and coal in the place where he was working, and failing in this, instead of first spragging the coal, he began to load a car when the slate and coal fell and caught him between the car and the falling mass, causing his instant death.



## SHOT-FIRERS HOLDING CERTIFICATES ISSUED DURING 1914

| Name                    | Address         | Name                    | Address          |
|-------------------------|-----------------|-------------------------|------------------|
| Adamic, Florian.....    | Canon City      | Campos, John.....       | Pallas           |
| Alderson, Alfred.....   | Lafayette       | Campos, Mike.....       | Oak Creek        |
| Alderson, John.....     | Louisville      | Casker, John.....       | Morley           |
| Alexander, Walter....   | Pagosa Junction | Casker, John Jr.....    | Morley           |
| Andrews, Williams.....  | Louisville      | Casker, William.....    | Morley           |
| Anderson, C. W.....     | Leyden          | Cavors, Jim.....        | Walsenburg       |
| Angus, James.....       | Somerset        | Chase, J. N.....        | Ravenwood        |
| Ankele, Phillip.....    | Lafayette       | Chew, Frank.....        | Walsenburg       |
| Armstrong, Owen.....    | Littell         | Claire, George.....     | Tioga            |
| Atwood, Ed.....         | Tioga           | Clark, W. S.....        | Leyden           |
| Babish, Charles.....    | South Canon     | Cocoles, James.....     | Delagua          |
| Baconick, Jerry.....    | Oakview         | Cole, J. B.....         | Pikeview         |
| Balsley, Wm.....        | Pallas          | Collins, B. F.....      | Gorham           |
| Barnett, P. B.....      | Lafayette       | Conners, Lindsey.....   | Strong           |
| Barrett, S. S.....      | Boulder         | Conway, Frank.....      | Denver           |
| Barr, W. F.....         | Leyden          | Coryell, P. C.....      | Rifle            |
| Bauer, Oscar.....       | Ojo             | Crocker, C. E.....      | Walsenburg       |
| Bay, W. W.....          | Durango         | Culp, Wm.....           | Pallas           |
| Baynk, Martin.....      | Walsenburg      | Cunningham, E.....      | Oak Creek        |
| Bell, Jas.....          | Lafayette       | Dalrymple, Jas. Jr..... | Coalmont         |
| Bell, Thos.....         | Walsenburg      | Daniels, Thos.....      | Tioga            |
| Berto, Joseph.....      | Baldwin         | Daurer, Fred.....       | Denver           |
| Bibby, T. H.....        | Tioga           | David, Fred.....        | Newcastle        |
| Blair, L. E.....        | Pallas          | David, Joseph P.....    | Newcastle        |
| Bodnar, Joe.....        | Aguilar         | Davies, Henry R.....    | Durango          |
| Bonfar, John.....       | Shumway         | Davis, Edward.....      | Cameo            |
| Bowen, Daniel.....      | Tabasco         | Davis, E. L.....        | Walsenburg       |
| Bradbury, C. E.....     | Strong          | Davis, Thos H.....      | Somerset         |
| Brissio, Frank.....     | Palisade        | Deckrow, Theon....      | Glenwood Springs |
| Brooks, Alex.....       | Dacona          | Deringe, Lonis.....     | Ravenwood        |
| Burns, H. L.....        | Pikeview        | Dick, Hugh.....         | Ojo              |
| Burns, Patrick.....     | Lester          | Dickie, Stewart.....    | Hastings         |
| Butchard, Gilbert.....  | Pallas          | Donnelly, Henry.....    | Florence         |
| Caddell, William J..... | Walsenburg      | Donnelly, Pat.....      | Pikeview         |
| Calabrese, Peter.....   | Durango         | Dowds, James.....       | Perlns           |
| Calivas, Gustavo.....   | Gulch           | Duffy, John.....        | Louisville       |
| Cameron, Jas. E.....    | Coalmont        | Edwards, David L.....   | Lafayette        |

# SHOT-FIRERS HOLDING CERTIFICATES ISSUED DURING 1914—Continued

| Name                   | Address          | Name                    | Address          |
|------------------------|------------------|-------------------------|------------------|
| Elieef, Steve.....     | Lafayette        | John, Thomas.....       | Newcastle        |
| Erler, Andrew.....     | Durango          | Jones, John C.....      | Lafayette        |
| Essman, Arthur H.....  | Lafayette        | Jones, Jos. T.....      | Littell          |
| Evangie, Frank.....    | Walsenburg       | Jorgensen, Neils.....   | Delagua          |
| Evez, Joseph.....      | Crested Butte    | Jumper, E. D.....       | Rouse            |
| Fario, Clyde.....      | Leyden           | Karcich, Vladimir.....  | Tabasco          |
| Ferrick, Mike.....     | Canon City       | Katsavonis, Mike.....   | Cameo            |
| Ferderber, Tony.....   | Pictou           | Kerr, Adam.....         | Cameo            |
| Ferrero, Joe.....      | Wootton          | Kerr, David.....        | Louisville       |
| Finley, William.....   | Newcastle        | Kerr, William.....      | Gorham           |
| Foley, W. J.....       | Louisville       | Kimberlin, O. D.....    | Ravenwood        |
| Gale, William.....     | Walsenburg       | King, W. J.....         | Walsen           |
| Gardiner, Peter.....   | Glenwood Springs | Klikus, John.....       | Ojo              |
| Gardner, Harvey.....   | Canon City       | Kmetz, Steve.....       | Walsenburg       |
| Garwood, John.....     | Junction City    | Knapp, H. O.....        | Colorado Springs |
| Gebler, Fred.....      | Denver           | Knudsen, Andrew.....    | Mack             |
| Gilchrist, Archie..... | Leyden           | Kollins, Peter.....     | Tioga            |
| Gooras, Nick.....      | Coalmont         | Kocovich, Mick.....     | Forbes           |
| Grabek, Math.....      | Canon City       | Kocovich, Nick.....     | Forbes           |
| Grantham, Jos.....     | Durango          | Lacey, Edwin H.....     | South Canon      |
| Guzowsky, Mike.....    | Walsen           | Lamb, Walter.....       | Walsen           |
| Hafen, William.....    | Mack             | Lawson, Nat.....        | Downer           |
| Haines, W. F.....      | Frederick        | Lee, Dan.....           | Colorado Springs |
| Hale, J. R.....        | Walsen           | Lippis, John.....       | Canon City       |
| Hanson, Nels.....      | Rockvale         | Little, W. E.....       | Pallas           |
| Happs, John.....       | Walsenburg       | Lloyd, John.....        | Frederick        |
| Harris, Walter.....    | Pallas           | Lutsick, Vincent.....   | Delagua          |
| Higgins, John.....     | Broomfield       | Malone, James.....      | Sopris*          |
| Houck, Alex.....       | Oak Creek        | March, Walter.....      | Cokedale         |
| Howells, Edwin.....    | Curtis           | Marks, Mike.....        | Oak Creek        |
| Hotter, Joseph.....    | Hesperus         | Marshall, Robt. A.....  | Farr             |
| Hughes, Thomas.....    | Hesperus         | Mathews, James.....     | Forbes           |
| Jerent, Joe.....       | Rapson           | Mariano, Batiste.....   | Walsen           |
| Jolley, Archie.....    | Walsenburg       | Mashitto, Rocco.....    | Canon City       |
| Jones, T. B.....       | Lafayette        | Mason, Albert.....      | Lafayette        |
| Johnson, Henry.....    | Walsen           | Mathews, Joe.....       | Oak Creek        |
| Johnstone, John.....   | Lafayette        | McCullough, Albert..... | Louisville       |

## SHOT-FIRERS HOLDING CERTIFICATES ISSUED DURING 1914—Continued

| Name                    | Address       | Name                     | Address          |
|-------------------------|---------------|--------------------------|------------------|
| McDermott, Charles..... | Baldwin       | Price, William.....      | Hastings         |
| McGregor, William.....  | Toltee        | Quella, John.....        | Tollerburg       |
| McIsaac, Alexander..... | Aguilar       | Quilan, Frank.....       | Denver           |
| McNa, Thomas.....       | Ojo           | Rector, H. L.....        | Pryor            |
| McVay, Howard.....      | Walsen        | Renzani, Frank.....      | Farr             |
| Mechin, John.....       | Newcastle     | Richards, Henry.....     | Somerset         |
| Middleton, George.....  | Floresta      | Robinson, E.....         | Walsen           |
| Miller, Andrew.....     | Lester        | Robusky, Walter.....     | Ludlow           |
| Miller, John F.....     | Pryor         | Roe, Albert.....         | Pikeview         |
| Mitchell, Dan.....      | Walsenburg    | Rogers, Jos.....         | Farr             |
| Mitchell, Josiah.....   | Louisville    | Romanvitch, John.....    | Floresta         |
| Moleski, Paul.....      | Oakview       | Rose, Arthur.....        | Walsen           |
| Moore, Wade H.....      | Walsen        | Rose, Edward.....        | Oakview          |
| Morrison, Angus.....    | Palisade      | Runge, Gustave W.....    | Denver           |
| Morton, R. S.....       | Broomfield    | Salovick, Jack.....      | Delagua          |
| Muir, John.....         | Walsen        | Salvatori, Pete.....     | Sopris           |
| Muir, John S.....       | Walsenburg    | Sandifer, J. C.....      | Walsen           |
| Munden, H. W.....       | Trinidad      | Sannic, George.....      | Floresta         |
| Munn, Thos. W.....      | Ojo           | Schneider, Jos. W.....   | Gorham           |
| Murphy, Frank.....      | Forbes        | Schuessler, W. J.....    | Oak Creek        |
| Naba, Peter.....        | Oak Creek     | Schulz, Wm.....          | Oak Creek        |
| Nelson, George L.....   | Primero       | Segna, Candido.....      | Sopris           |
| Newton, Barney.....     | Walsen        | Seoysk, Joe.....         | Louisville       |
| Nickolas, Nick.....     | Berwind       | Sennings, Chas.....      | Colorado Springs |
| Nickolas, Daniel.....   | Newcastle     | Seymour, H. C.....       | Baldwin          |
| Oblak, Frank.....       | Spring Gulch  | Shackley, Herbert L..... | Durango          |
| Oldfield, James.....    | Pallas        | Shustes, Ernest.....     | Oak Creek        |
| Owen, Llewelyn.....     | Pallas        | Sigsby, Morris.....      | Palisade         |
| Patterson, A. A.....    | Frederick     | Simmons, Jas. H.....     | Firestone        |
| Pearson, Carl.....      | Delagua       | Simpson, John.....       | Tioga            |
| Peratti, Guy.....       | Junction City | Simpson, J. C.....       | Erle             |
| Perry, Frank.....       | Louisville    | Sire, August.....        | Lafayette        |
| Pertele, Joseph.....    | Ojo           | Smerich, Pete.....       | Rugby            |
| Pickens, Andrew.....    | La Veta       | Smith, Charles.....      | Cokedale         |
| Poleski, Joseph.....    | Farr          | Smith, Henry.....        | Louisville       |
| Powers, Patrick.....    | Louisville    | Smith, R. E.....         | Walsen           |
| Premusik, Blas.....     | Walsenburg    | Solo, Tony.....          | Wootton          |



## SHOT-FIRERS HOLDING CERTIFICATES ISSUED DURING 1914—Concluded

| Name                       | Address          | Name                    | Address          |
|----------------------------|------------------|-------------------------|------------------|
| Sponsky, John.....         | Ojo              | Walker, A. M.....       | Farr             |
| Starkey, John.....         | Downer           | Walker, Charles.....    | Somerset         |
| Stesek, Marco.....         | Floresta         | Walker, John H.....     | Somerset         |
| Steward, Peter.....        | Colorado Springs | Walsh, Robert G.....    | Frederick        |
| Stone, Jack.....           | Newcastle        | Ward, Jos.....          | Walsen           |
| Stonich, Frank.....        | Superior         | Warren, Jas. C.....     | Oak Creek        |
| Tafoya, Frank.....         | Walsenburg       | Watkins, Nathaniel..... | Newcastle        |
| Tappro, August.....        | Gulch            | Weaver, L. M.....       | Colorado Springs |
| Taylor, Michael.....       | Newcastle        | Wertin, Joe.....        | Tollerburg       |
| Thomas, Obadiah.....       | Louisville       | Wheatley, Mark.....     | Oakview          |
| Thompson, Grant.....       | Pikeview         | Whiles, Ernest.....     | Frederick        |
| Thompson, John H.....      | Lafayette        | Williams, Robert P..... | Baldwin          |
| Topping, Archie.....       | Ravenwood        | Williams, Gwilym.....   | Sopris           |
| Toward, George.....        | Bowie            | Williams, T. J.....     | Harris           |
| Trembath, Richard.....     | Tioga            | Williamson, Sam.....    | Walsen           |
| Trew, Charles.....         | Tercio           | Williamson, Harry.....  | Louisville       |
| Twite, William.....        | Oak Creek        | Wylan, Jay.....         | Ludlow           |
| Turcsanski, Steve.....     | Somerset         | Yacolli, Frank.....     | Gray Creek       |
| Vachersee, Victor.....     | Bear River       | Yates, John.....        | Hastings         |
| Vallery, John.....         | Lafayette        | Yearack, Victor.....    | Walsenburg       |
| Vaughn, John.....          | Palisade         | Yob, Lorenzo.....       | Lafayette        |
| Vaughn, Levy.....          | Palisade         | Zullo, Dominic.....     | Glenwood Springs |
| Vercakis, George.....      | Cameo            | Zwahlen, Hyrum W.....   | Somerset         |
| Vicendone, Ferdinando..... | Hastings         |                         |                  |



# Directory of Coal Mines

## ARCHULETA COUNTY

| Names of Mines | Names and Addresses of Operators   | President of Company | General Manager or Superintendent | Local Supt. | Mode of Ventilation | Railroad Connections |
|----------------|------------------------------------|----------------------|-----------------------------------|-------------|---------------------|----------------------|
| Tallian.....   | Pagosa Lumber Co., Pagosa Springs. | .....                | O. S. Galbreath, Jr.              | Wm. Gill    | Nat.                | D. & R. G. R. R.     |

## BOULDER COUNTY

| Names of Mines     | Names and Addresses of Operators                 | President of Company | General Manager or Superintendent | Local Supt.        | Mode of Ventilation | Railroad Connections    |
|--------------------|--|----------------------|-----------------------------------|--------------------|---------------------|-------------------------|
| Lewis.....         | J. T. Lewis, Boulder.....                        | .....                | J. T. Lewis                       | .....              | Nat.                | .....                   |
| Gorham.....        | Rocky Mountain Fuel Co., Denver...D. W. Brown    | .....                | Geo. T. Peart                     | Thos. Hilton       | Fan                 | C. & S.                 |
| Hecla.....         | Rocky Mountain Fuel Co., Denver...D. W. Brown    | .....                | Geo. T. Peart                     | J. C. Williams     | Fan                 | C. & S.                 |
| Industrial.....    | Rocky Mountain Fuel Co., Denver...D. W. Brown    | .....                | Geo. T. Peart                     | F. L. L. MacCormac | Fan                 | C. & S.                 |
| New Fox.....       | New Fox Coal Co., Gorham.....                    | .....                | .....                             | Guy Fox            | Nat.                | C. & S.                 |
| Mitchell.....      | Rocky Mountain Fuel Co., Denver...D. W. Brown    | .....                | Geo. T. Peart                     | J. J. Thomas       | Fan                 | B. & M. and U. P.       |
| Rex No. 1.....     | Rocky Mountain Fuel Co., Denver...D. W. Brown    | .....                | Geo. T. Peart                     | W. R. Atkin        | Fan                 | C. & S.                 |
| Rex No. 2.....     | Rocky Mountain Fuel Co., Denver...D. W. Brown    | .....                | Geo. T. Peart                     | J. C. Williams     | Fan                 | C. & S.                 |
| Simpson.....       | Rocky Mountain Fuel Co., Denver...D. W. Brown    | .....                | Geo. T. Peart                     | I. W. Griffiths    | Fan                 | B. & M., C. & S., U. P. |
| Standard.....      | Rocky Mountain Fuel Co., Denver...D. W. Brown    | .....                | Geo. T. Peart                     | D. M. Sultz        | Fan                 | B. & M., C. & S., U. P. |
| Vulcan.....        | Rocky Mountain Fuel Co., Denver...D. W. Brown    | .....                | Geo. T. Peart                     | Chas. Billington   | Fan                 | C. & S.                 |
| Monarch No. 1..... | National Fuel Co., Denver.....H. Van Mater       | .....                | .....                             | Andrew Walker      | Fan                 | C. & S.                 |
| Monarch No. 2..... | National Fuel Co., Denver.....H. Van Mater       | .....                | Joseph Watson                     | W. E. Oliver       | Fan                 | C. & S.                 |
| Centennial.....    | Big Four Coal & Coke Co., Denver...L. B. Cannon. | .....                | .....                             | F. H. McFadden     | Fan                 | C. & S.                 |
| Electric.....      | Electric Coal Co., Boulder.....                  | .....                | .....                             | James Simpson      | Fan                 | C. & S.                 |
| Fox.....           | Fox Coal Mining Co., Denver.....M. P. Fox        | .....                | M. P. Fox                         | J. W. Schultz      | Fan                 | C. & S.                 |
| Matchless.....     | Great Matchless Fuel Co., Denver...M. P. Fox     | .....                | M. P. Fox                         | Elmer Ellis        | Fan                 | C. & S.                 |

|                    |   |               |        |         |
|--------------------|---|---------------|--------|---------|
| Mile High.....     | Mile High Coal Co., Lafayette.....        | John O. Day   | Nat.   | .....   |
| Black Diamond..... | Mitchell & Graham, Boulder.....           | J. T. Graham  | Blower | .....   |
| Nonpareil.....     | Brooks-Harrison Fuel Co., Louisville..... | J. E. Brooks  | Fan    | C. & S. |
| Strathmore.....    | T. B. Jones, Denver.....                  | J. E. Brooks  | Fan    | C. & S. |
| Sunnyside.....     | Big Six Coal Co., Louisville.....         | J. A. Carveth | Fan    | C. & S. |

## DELTA COUNTY

| Names of Mines     | Names and Addresses of Operators            | President of Company | General Manager or Superintendent | Local Supt.    | Ventilation Method | Railroad Connections |
|--------------------|---|----------------------|-----------------------------------|----------------|--------------------|----------------------|
| Bennett.....       | Hotchkiss Fuel & Sup. Co., Hotchkiss.....   | .....                | .....                             | M. W. Bennett  | Nat.               | .....                |
| Black Diamond..... | Farmers' Progressive Coal Co., Paonia.....  | Chas. Cowan          | .....                             | Roland Blunt   | Nat.               | D. & R. G.           |
| Cedaredge.....     | Surface Creek Co-op. C. Co., Cedaredge..... | .....                | .....                             | Albert Bull    | Nat.               | .....                |
| Colby.....         | J. C. Bond, Cedaredge.....                  | .....                | .....                             | .....          | Nat.               | .....                |
| Converse.....      | Frank Converse, Paonia.....                 | .....                | .....                             | Frank Converse | Nat.               | .....                |
| Dugger.....        | Dugger Coal Mining Co., Delta.....          | .....                | .....                             | .....          | Nat.               | .....                |
| Fairview.....      | Grand Mesa Fuel Co., Delta.....             | .....                | .....                             | .....          | Nat.               | .....                |
| Farmer.....        | Paonia Coal Co., Paonia.....                | .....                | .....                             | P. B. Jenkins  | Nat.               | .....                |
| King.....          | Juanita Coal & Coke Co., Bowie.....         | Alexander Bowie      | Wallace D. Bowie                  | .....          | Fan                | D. & R. G.           |
| Newman.....        | G. A. Clark, Hotchkiss.....                 | .....                | .....                             | .....          | Nat.               | .....                |
| States.....        | States Coal Co., Cedaredge.....             | .....                | .....                             | .....          | Nat.               | .....                |
| Winton.....        | C. O. Billstrom, Austin.....                | .....                | C. G. States                      | .....          | Nat.               | .....                |

## EL PASO COUNTY

| Names of Mines    | Names and Addresses of Operators      | President of Company | General Manager or Superintendent | Local Supt.      | Mode of Ventilation | Railroad Connections         |
|-------------------|---------------------------------------|----------------------|-----------------------------------|------------------|---------------------|------------------------------|
| Danville.....     | Tudor Coal Co., Colorado Springs.     |                      |                                   | W. D. Tudor      | Fan                 | A. T. & S. F.                |
| El Paso.....      | El Paso Co. L. & F. Co., Colo. Spgs.  | J. E. Ulrich         |                                   | Fred W. Price    | Fan                 | A. T. & S. F., C. R. I. & P. |
| Franceville.....  | Thos. E. David, Colorado Springs.     |                      |                                   | Thos. E. David   | Nat.                |                              |
| Patterson.....    | Alex. Patterson & Son, Colo. Springs. |                      | Alex. Patterson                   | George Patterson | Fan                 |                              |
| Pikeview.....     | Pike's Peak Fuel Co., Colo. Springs.  | J. T. Milliken       | H. McGarry                        | Geo. L. Crawford | Fan                 | D. & R. G.                   |
| Rapson No. 2..... | Rapson Coal Mining Co., Colo. Spgs.   | W. W. Curtis         |                                   | Ralph Wooden     | Fan                 | C. R. I. & P.                |
| Thomas.....       | Thomas Coal Co., Colorado Springs.    |                      |                                   | Thos. E. Thomas  | Nat.                |                              |
| Clark.....        | Clark & Benedict.                     |                      |                                   |                  | Nat.                |                              |

## FREMONT COUNTY

| Names of Mines    | Names and Addresses of Operators      | President of Company | General Manager or Superintendent | Local Supt.     | Mode of Ventilation | Railroad Connections |
|-------------------|---------------------------------------|----------------------|-----------------------------------|-----------------|---------------------|----------------------|
| Coal Creek.....   | Colorado Fuel & Iron Co., Denver.     | J. F. Welborn        | E. H. Weitzel                     | Ben Beach       | Fan                 | A. T. & S. F.        |
| Fremont.....      | Colorado Fuel & Iron Co., Denver.     | J. F. Welborn        | E. H. Weitzel                     | W. J. Smith     | Fan                 | D. & R. G.           |
| Nonac.....        | Colorado Fuel & Iron Co., Denver.     | J. F. Welborn        | E. H. Weitzel                     | Thos. J. Tynan  | Fan                 | A. T. & S. F.        |
| Chandler.....     | Victor-American Fuel Co., Denver.     | J. C. Osgood.        | W. J. Murray                      | D. J. Griffiths | Fan                 | D. & R. G.           |
| Radiant.....      | Victor-American Fuel Co., Denver.     | J. C. Osgood.        | W. J. Murray                      | James Struthers | Fan                 | A. T. & S. F.        |
| Brookside.....    | Brookside Coal Co., Canon City.       |                      |                                   | John Lippis     | Nat.                |                      |
| Central.....      | Colo. Central C. & M. Co., Pueblo.    |                      |                                   | J. A. Littell   | Nat.                | A. T. & S. F.        |
| Dubble Dick.....  | Husband Coal Co., Coal Creek.         |                      |                                   | R. Husband      | Nat.                |                      |
| Emerald.....      | Williamsburg S. C. Co., Williamsburg. |                      |                                   | H. J. Smith     | Fur.                | A. T. & S. F.        |
| Royal Gorge.....  | Royal Gorge C & F C Co., Canon City.  | Geo. G. Bettis       |                                   | Ben Baumgartel  | Fan                 | A. T. & S. F.        |
| Smith-Tanner..... | Eagle Coal Co, Florence.              |                      |                                   | L. F. Schumm    | Nat.                |                      |

Williamsburg Slope-Donnelly Coal Co., Florence.....Henry Donnelly Nat.  
 Willie.....Petry Coal Co., Florence.....Samuel Petry Tun.

## GARFIELD COUNTY

| Names of Mines   | Names and Addresses of Operators         | President of Company | General Manager or Superintendent | Local Supt. | Mode of Ventilation | Railroad Connections |
|------------------|--|----------------------|-----------------------------------|-------------|---------------------|----------------------|
| Carbonera.....   | Gilson Asphaltum Co., Watson, Utah.....  |                      | Homer T. Ford                     |             | Nat.                | Uintah               |
| Harvey Gap.....  | P. C. Coryell, Newcastle.....            |                      | V. Rapin                          |             | Nat.                |                      |
| Mascot.....      | Glenwood M. & P. Co., Glenwood Spgs..... |                      | Peter Gardner                     |             | Fan                 | C. M.                |
| Midland.....     | Rocky Mountain Fuel Co., Denver.....     | D. W. Brown          | Geo. T. Peart                     | J. E. Smith | Fan                 | C. M.                |
| South Canon..... | South Canon Coal Co., Denver.....        | W. B. Lewis          | H. F. Nash                        | Evan Thomas | Fan                 | C. M.                |
| Vulcan.....      | Garfield Mine Leasing Co., Denver..      | D. W. Brown          |                                   | Thos. Gibby | Fan                 | C. M.                |

## GUNNISON COUNTY

| Names of Mines     | Names and Addresses of Operators                      | President of Company    | General Manager or Superintendent | Local Supt.        | Mode of Ventilation | Railroad Connections |
|--------------------|---|-------------------------|-----------------------------------|--------------------|---------------------|----------------------|
| Alpine.....        | Rocky Mountain Fuel Co., Denver.....                  | D. W. Brown             | Geo. T. Peart                     | J. G. Featherstone | Fan                 | C. & S.              |
| Baldwin-Star.....  | Baldwin Fuel Co., Denver.....                         | Frank Bulkley           |                                   | C. A. Partch       | Nat.                | D. & R. G.           |
| Bulkley.....       | Crested Butte Coal Co., Denver.....                   | Frank Bulkley           | E. H. Weitzel                     | O. V. Roberts      | Fan                 | D. & R. G.           |
| Floresta.....      | Colorado Fuel & Iron Co., Denver.....                 | J. F. Welborn           | J. D. Cribbs                      | James Ralston      | Fan                 | D. & R. G.           |
| Horace.....        | Pueblo Fuel & Mining Co., Pueblo.....                 |                         |                                   | D. La Plante       | Nat.                | D. & R. G.           |
| New Baldwin.....   | La Plante & Sons, Gunnison.....                       |                         |                                   | W. R. Kerr         | Fan                 | D. & R. G.           |
| Porter.....        | Littell Coal & Mining Co., Pueblo.....                |                         |                                   | O. V. Roberts      | Fan                 | D. & R. G.           |
| Smith.....         | Crested Butte Anthracite Min. Co., Crested Butte..... | A. H. Cowle, Vice-Pres. | W. C. Ferguson                    | R. Williams, Jr.   | Fan                 | D. & R. G.           |
| Somerset.....      | Utah Fuel Co., Denver.....                            |                         |                                   | Jos. David         | Nat.                |                      |
| Great Western..... | Joe David, Gunnison.....                              |                         |                                   |                    |                     |                      |



## HUEFANO COUNTY

| Names of Mines   | Names and Addresses of Operators                  | President of Company | General Manager or Superintendent | Local Supt.    | Mode of Ventilation | Railroad Connections   |
|------------------|---|----------------------|-----------------------------------|----------------|---------------------|------------------------|
| Cameron.....     | Colorado Fuel & Iron Co., Denver.....             | J. F. Welborn        | E. H. Weitzel                     | C. A. Kaiser   | Fan                 | C. & S.                |
| Ideal.....       | Colorado Fuel & Iron Co., Denver.....             | J. F. Welborn        | E. H. Weitzel                     | W. J. Tyson    | Fan                 | C. & S.                |
| Lester.....      | Colorado Fuel & Iron Co., Denver.....             | J. F. Welborn        | E. H. Weitzel                     | W. G. Deck     | Fan                 | D. & R. G.             |
| McNally.....     | Colorado Fuel & Iron Co., Denver.....             | J. F. Welborn        | E. H. Weitzel                     | T. P. Davis    | Fan                 | C. & S.                |
| Pietou.....      | Colorado Fuel & Iron Co., Denver.....             | J. F. Welborn        | E. H. Weitzel                     | Wm. Manley     | Fan                 | D. & R. G.             |
| Robinson.....    | Colorado Fuel & Iron Co., Denver.....             | J. F. Welborn        | E. H. Weitzel                     | W. S. Getchell | Fan                 | C. & S. and D. & R. G. |
| Rouse.....       | Colorado Fuel & Iron Co., Denver.....             | J. F. Welborn        | E. H. Weitzel                     | W. G. Deck     | Fan                 | D. & R. G.             |
| Walsen.....      | Colorado Fuel & Iron Co., Denver.....             | J. F. Welborn        | E. H. Weitzel                     | W. S. Getchell | Fan                 | C. & S. and D. & R. G. |
| Ravenwood.....   | Victor-American Fuel Co., Denver.....             | J. C. Osgood         | W. J. Murray                      | John Neish     | Fan                 | C. & S.                |
| Big Four.....    | Big Four Coal & Coke Co., Denver.....             | L. B. Cannon         | .....                             | John McQuade   | Fan                 | C. & S. and D. & R. G. |
| Black Canon..... | New Maitland Coal Co., Walsenburg.....            | .....                | .....                             | Samuel Dunford | Fan                 | D. & R. G.             |
| Breen.....       | Breen Coal Mining Co., Walsenburg.....            | .....                | .....                             | M. Brennan     | Fan                 | C. & S. and D. & R. G. |
| Caddell.....     | Black Canon Fuel Co., Denver.....                 | John Q. Royce        | .....                             | Robt. Curry    | Fan                 | C. & S. and D. & R. G. |
| Carbonado.....   | Carbonado Coal Mining Co., Denver.....            | J. B. Hutchison      | .....                             | Robt. T. Bell  | Fan                 | D. & R. G.             |
| Gordon.....      | Gordon Coal Co., Walsenburg.....                  | .....                | .....                             | R. F. Poli     | Fan                 | D. & R. G.             |
| Larimore.....    | Monument Valley Coal Co., Colo., SpsgE. D. Powers | .....                | .....                             | P. G. Miller   | Fan                 | D. & R. G.             |
| Loma.....        | Loma Fuel Co., Walsenburg.....                    | .....                | .....                             | Joseph Ball    | Fan                 | C. & S.                |
| Mutual.....      | Mutual Coal Co., Denver.....                      | .....                | .....                             | Alex. Marshall | Fan                 | D. & R. G.             |
| Oakdale.....     | Oakdale Coal Co., Denver.....                     | Wm. B. Lewis         | John D. Jones                     | W. L. Morgan   | Fan                 | D. & R. G.             |
| Pinon.....       | Rocky Mountain Fuel Co., Denver.....              | D. W. Brown          | Geo. T. Peart                     | Chas. Meerdink | Fan                 | D. & R. G.             |
| Prior.....       | Union Coal & Coke Co., Denver.....                | J. W. Bowen          | .....                             | Chas. Beuchat  | Fan                 | C. & S. and D. & R. G. |
| Reliance.....    | Alliance Coal Co., Denver.....                    | D. A. Cannon         | .....                             | John McDowell  | Fan                 | D. & R. G.             |

|                |  |                 |                  |      |                        |
|----------------|--|-----------------|------------------|------|------------------------|
| Rockland.....  | Walsenburg Coal M. Co., Walsenburg     | Geo. Fruth      | P. J. Stone      | Fan  | C. & S. and D. & R. G. |
| Rugby.....     | Rugby Fuel Co., Denver.....            | Geo. D. Kimball | Thos. McLaughlin | Fan  | C. & S. and D. & R. G. |
| Sunnyside..... | Sunnyside Coal Mining Co., Denver..... | W. F. Oakes     | J. M. Page       | Fan  | C. & S. and D. & R. G. |
| Tioga.....     | Minnequa Coal Co., Denver.....         | E. F. McGowan   | J. H. Vincent    | Fan  | C. & S. and D. & R. G. |
| Toltec.....    | Aztec Coal Mining Co., Walsenburg..... | Geo. Fruth      | S. B. Smith      | Fan  | C. & S. and D. & R. G. |
| Turner.....    | Turner Coal Co., Walsenburg.....       | W. R. Nichol    |                  | Fur. | D. & R. G.             |

## JACKSON COUNTY

| Names of Mines | Names and Addresses of Operators | President of Company | General Manager or Superintendent | Local Supt. | Mode of Ventilation | Railroad Connections |
|----------------|----------------------------------|----------------------|-----------------------------------|-------------|---------------------|----------------------|
| Coalmont.....  | Laramie, Wyo.....                | E. R. Miller         | J. W. Siple                       | Wm. Waddell | Fan                 | C. W. & E.           |
| Ferrier.....   | W. T. Ferrier, Coalmont.....     |                      | W. T. Ferrier                     |             | Nat.                |                      |

## JEFFERSON COUNTY

| Names of Mines    | Names and Addresses of Operators | President of Company | General Manager or Superintendent | Local Supt.   | Mode of Ventilation | Railroad Connections |
|-------------------|----------------------------------|----------------------|-----------------------------------|---------------|---------------------|----------------------|
| Leyden No. 2..... | Leyden Coal Co., Denver.....     | S. M. Perry          | F. A. Perry                       | Fred Neumayer | Fan                 | D. & I. M.           |
| Rooney.....       | Thos. Sheperd.....               |                      | Thos. Sheperd, Jr.                |               | Nat.                | D. I. & M.           |

## LAS ANIMAS COUNTY

| Names of Mines       | Names and Addresses of Operators                        | President of Company | General Manager or Superintendent | Local Supt.     | Mode of Ventilation | Railroad Connections |
|----------------------|---|----------------------|-----------------------------------|-----------------|---------------------|----------------------|
| Berwind.....         | Colorado Fuel & Iron Co., Denver....                    | J. F. Welborn        | E. H. Weitzel                     | J. P. Davis     | Fan                 | C. & S.              |
| Frederick.....       | Colorado Fuel & Iron Co., Denver....                    | J. F. Welborn        | E. H. Weitzel                     | James O'Neil    | Fan                 | C. & W.              |
| Morley.....          | Colorado Fuel & Iron Co., Denver....                    | J. F. Welborn        | E. H. Weitzel                     | Jas. Wilson     | Fan                 | A. T. & S. F.        |
| Primero.....         | Colorado Fuel & Iron Co., Denver....                    | J. F. Welborn        | E. H. Weitzel                     | Jos. Haske      | Fan                 | C. & W.              |
| Sopris.....          | Colorado Fuel & Iron Co., Denver....                    | J. F. Welborn        | E. H. Weitzel                     | Chas. Chambers  | Fan                 | C. & S. & C. & W.    |
| Tabasco.....         | Colorado Fuel & Iron Co., Denver....                    | J. F. Welborn        | E. H. Weitzel                     | Chas. O'Neil    | Fan                 | C. & S.              |
| Tercio.....          | Colorado Fuel & Iron Co., Denver....                    | J. F. Welborn        | E. H. Weitzel                     | John Shaw       | Fan                 | C. & W.              |
| Delagua.....         | Victor-American Fuel Co., Denver....                    | J. C. Osgood         | W. J. Murray                      | B. W. Snodgrass | Fan                 | C. & S. E.           |
| Gray Creek.....      | Victor-American Fuel Co., Denver....                    | J. C. Osgood         | W. J. Murray                      | Thos. Jolly     | Fan                 | C. & S.              |
| Hastings.....        | Victor-American Fuel Co., Denver....                    | J. C. Osgood         | W. J. Murray                      | Jas. Cameron    | Fan                 | C. & S. E.           |
| Black Diamond.....   | Cedar Hill Coal & Coke Co., Denver....                  |                      | D. M. Harrington                  |                 | Fan                 | C. & S.              |
| Greenville.....      | Cedar Hill Coal & Coke Co., Denver....                  |                      | D. M. Harrington                  | H. F. Tennant   | Fan                 | C. & S.              |
| Toller.....          | Cedar Hill Coal & Coke Co., Denver....                  |                      | D. M. Harrington                  | H. F. Tennant   | Fan                 | C. & S.              |
| Majestic.....        | Rocky Mountain Fuel Co., Denver....                     | D. W. Brown          | Geo. T. Peart                     | J. I. Dalby     | Fan                 | C. & S. & D. & R. G. |
| Piedmont.....        | Rocky Mountain Fuel Co., Denver....                     | D. W. Brown          | Geo. F. Peart                     | Wm. Morgan      | Fan                 | C. & S.              |
| Amador.....          | Amador Fuel Co., Aguilar.....                           |                      |                                   | John Allan      | Fur.                | C. & S.              |
| Baldy.....           | Baldy Coal Co., Trinidad.....                           |                      |                                   | W. O. Sherman   | Nat.                |                      |
| Bloom.....           | Jeffreys Coal Co., Trinidad.....                        |                      |                                   | Albert Jeffreys | Nat.                |                      |
| Broadhead No. 9..... | Southern Colo. Coal Co., Colo. Sigs.E. S. Hartwell..... |                      |                                   | W. M. Burt      | Fan                 | C. & S.              |
| Cokedale No. 1.....  | Carbon Coal & Coke Co., Denver.....                     |                      |                                   | D. D. Dodge     | Fan                 | C. & S. & D. & R. G. |
| Cokedale No. 2.....  | Carbon Coal & Coke Co., Denver.....                     |                      |                                   | D. D. Dodge     | Fan                 | C. & S. & D. & R. G. |
| Empire.....          | Empire Coal Mining Co., Denver.....                     | J. W. Siple          |                                   |                 | Fan                 | C. & S. & D. & R. G. |

|                     |   |                          |                          |
|---------------------|---|--------------------------|--------------------------|
| Faro.....           | J. P. Shew.....                             | J. P. Shew.....          | Fur.....                 |
| Fisher's Peak.....  | Fisher's Peak Coal Co., Trinidad.....       | R. Marsh.....            | Fan.....                 |
| Forbes No. 6.....   | Chicosa Fuel Co., Denver.....               | Geo. T. Peart.....       | .....                    |
| Forbes No. 9.....   | Chicosa Fuel Co., Denver.....               | D. W. Brown.....         | Fan.....                 |
| Kenneth.....        | Temple Fuel Co., Trinidad.....              | F. S. Wood.....          | Fan.....                 |
| Ludlow.....         | Huerfano Coal Co., Denver.....              | S. S. Murphy.....        | Fan.....                 |
| McPherson.....      | Thos. McPherson, Sopris.....                | Thos. McPherson Nat..... | .....                    |
| Niggerhead.....     | Blk. D. (Niggerh'd C. W. A.), Trinidad..... | J. E. McLaughlin.....    | C. & S.....              |
| Primrose.....       | Primrose Coal Co., Pueblo.....              | H. B. King.....          | C. & S. & D. & R. G..... |
| Prospect.....       | Prospect Coal Co., Trinidad.....            | L. F. Jones.....         | .....                    |
| Rapson No. 1.....   | Rapson Coal M. Co., Colo. Springs.....      | W. W. Curtis.....        | Fur.....                 |
| Royal.....          | Royal Fuel Co., Denver.....                 | H. Van Mater.....        | Fan.....                 |
| Santa Fe.....       | Santa Fe Coal Co., Denver.....              | S. S. Murphy.....        | Fan.....                 |
| Viola.....          | Johnston Coal & Coke Co., Trinidad.....     | Austin Lunney.....       | A. T. & S. F.....        |
| Wiley.....          | Johnston Coal & Coke Co., Trinidad.....     | .....                    | .....                    |
| Wootton-Turner..... | Wootton Land & Fuel Co., Wootton.....       | J. A. Owenby.....        | A. T. & S. F.....        |

## LA PLATA COUNTY

| Names of Mines     | Names and Addresses of Operators        | President of Company | General Manager or Superintendent | Local Supt.    | Mode of Ventilation | Railroad Connections  |
|--------------------|---|----------------------|-----------------------------------|----------------|---------------------|-----------------------|
| City.....          | Royal Leasing Co., Durango.....         |                      | W. J. Gifford                     | David Logan    | Nat.                | D. & R. G.            |
| Hesperus.....      | Porter Fuel Co., Durango.....           |                      | W. J. Gifford                     | W. I. Gifford  | Fan                 | R. G. S.              |
| O. K.....          | O. K. Coal Co., Durango.....            |                      |                                   | W. W. Bay      | Nat.                |                       |
| Peerless.....      | San Juan Dev. & Invt. Co., Durango..... |                      |                                   |                | Nat.                |                       |
| Perrin's Peak..... | Calumet Fuel Co., Denver.....           |                      | W. C. Ferguson                    | L. McCormick   | Fan                 | R. G. S.              |
| San Juan.....      | Carbon Coal & Coke Co., Durango.....    |                      |                                   | F. C. Gilbert  | Fan                 | D. & R. G. & R. G. S. |
| Carbon.....        | Carbon Coal Co., Durango.....           |                      |                                   | Peter Phillips | Nat.                | D. & R. G.            |

## MESA COUNTY

| Names of Mines  | Names and Addresses of Operators          | President of Company | General Manager or Superintendent | Local Supt.      | Mode of Ventilation | Railroad Connections |
|-----------------|---|----------------------|-----------------------------------|------------------|---------------------|----------------------|
| Book Cliff..... | Book Cliff R. R. Co., Grand Junction..... |                      | W. S. Phillips                    | T. E. Sanford    | Nat.                | B. C.                |
| Cameo.....      | Grand Junction M. & F. Co., Denver.....   |                      |                                   | John McNeil, Jr. | Fan                 | D. & R. G. & C. M.   |
| Garfield.....   | Garfield Coal M. Co., Grand Junction..... |                      |                                   | A. E. Bayless    | Nat.                | D. & R. G. & C. M.   |
| Grandview.....  | Grandview Coal Co., Palisade.....         |                      |                                   | F. F. De Rush    | Fur.                | Not direct.          |
| Palisade.....   | Palisade Coal & Supply Co, Palisade.....  |                      |                                   | Henry Dezman     | Nat.                | D. & R. G. & C. M.   |
| P. V. ....      | P. V. Coal Co., Cameo.....                |                      |                                   | Adam Kerr        | Nat.                | D. & R. G. & C. M.   |
| Riverside.....  | Levi Vaughn, Palisade.....                |                      |                                   | Levi Vaughn      | Nat.                |                      |
| Stokes.....     | Stokes Coal Co., Palisade.....            |                      |                                   | W. D. Stokes     | Nat.                | D. & R. G. & C. M.   |
| Winger.....     | New Grand Mesa Coal Co., Palisade.....    |                      |                                   | S. C. Goodwin    | Nat.                |                      |

## MOFFAT COUNTY

| Names of Mines | Names and Addresses of Operators | President of Company | General Manager or Superintendent | Local Supt.   | Mode of Ventilation | Railroad Connections |
|----------------|----------------------------------|----------------------|-----------------------------------|---------------|---------------------|----------------------|
| Collom.....    | Joseph Collom, Axial.....        |                      |                                   | Joseph Collom | Nat.                |                      |

## MONTEZUMA COUNTY

| Names of Mines | Names and Addresses of Operators | President of Company | General Manager or Superintendent | Local Supt. | Mode of Ventilation | Railroad Connections |
|----------------|----------------------------------|----------------------|-----------------------------------|-------------|---------------------|----------------------|
| Mancos.....    | Geo. S. Spencer, Mancos.....     |                      | Geo. S. Spencer                   |             | Nat.                |                      |
| Peacock.....   | F. W. Stubbs, Mancos.....        |                      | F. W. Stubbs                      |             | Tun.                | R. G. S.             |
| Valley.....    | Frank Gross, Mancos.....         |                      | Frank Gross                       |             | Nat.                |                      |

## PITKIN COUNTY

| Names of Mines    | Names and Addresses of Operators       | President of Company | General Manager or Superintendent | Local Supt.    | Mode of Ventilation | Railroad Connections |
|-------------------|--|----------------------|-----------------------------------|----------------|---------------------|----------------------|
| Marion.....       | A. Marchetti, Lessee Spring Gulch..... |                      | A. Marchetti                      |                | Nat.                | C. M.                |
| Spring Gulch..... | Colorado Fuel & Iron Co., Denver.....  | J. F. Welborn        | E. H. Weltzel                     | A. H. Robinson | Fan                 | C. M.                |

## ROUTT COUNTY

| Names of Mines          | Names and Addresses of Operators       | President of Company | General Manager or Superintendent | Local Supt.         | Mode of Ventilation | Railroad Connections |
|-------------------------|--|----------------------|-----------------------------------|---------------------|---------------------|----------------------|
| Electric.....           | Routt Electric Coal Co., Denver.....   |                      |                                   | C. C. White         | Nat.                | D. & S. L.           |
| Emerich.....            | Lon Workman, Hayden.....               |                      | Lon Workman                       |                     | Nat.                |                      |
| Juniper.....            | Hayden Bros. Coal Corp'n., Denver..... |                      |                                   | C. P. O'Neil        | Fan                 | D. & S. L.           |
| Oak Hills No. 1.....    | Moffat Coal Co., Denver.....           | S. M. Perry          |                                   | R. M. Perry         | Fan                 | D. & S. L.           |
| Oak Hills No. 2.....    | Moffat Coal Co., Denver.....           | S. M. Perry          |                                   | R. M. Perry         | Fan                 | D. & S. L.           |
| Pinnacle.....           | Routt County Fuel Co., Denver.....     | E. L. Prentiss       |                                   | Wm. Burt            | Fan                 | D. & S. L.           |
| Yampa Valley No. 1..... | Yampa Valley Coal Co., Denver.....     |                      | John Connell                      | J. J. Wolfersperger | Fan                 | D. & S. L.           |
| Yampa Valley No. 2..... | Yampa Valley Coal Co., Denver.....     |                      | John Connell                      | J. J. Wolfersperger | Fur                 | D. & S. L.           |
| Bear River.....         | Bear River Coal Co., Denver.....       |                      |                                   | J. R. Fleming       | Nat.                | D. & S. L.           |
| Harris.....             | Colorado-Utah Coal Co., Denver.....    | G. W. Harris         |                                   | Byron Harris        | Fan                 | D. & S. L.           |
| No. 1.....              | Jones & Irwin, Oak Creek.....          |                      |                                   | D. W. Jones         | Fur.                | D. & S. L.           |



## WELD COUNTY

| Names of Mines       | Names and Addresses of Operators           | President of Company | General Manager or Superintendent | Local Supt.     | Mode of Ventilation | Railroad Connections |
|----------------------|--|----------------------|-----------------------------------|-----------------|---------------------|----------------------|
| Parkdale.....        | National Fuel Co., Denver.....             | H. Van Mater         | Joseph Watson                     | Jas. Etchells   | Fan                 | C. B. & Q.           |
| Puritan.....         | National Fuel Co., Denver.....             | H. Van Mater         | Joseph Watson                     | Thos. F. McGinn | Fan                 | U. P.                |
| Eureka.....          | Eureka Coal Co., Erie.....                 |                      |                                   | Lewis A. Nixon  | Fan                 | .....                |
| Evans.....           | Evans Fuel Co., Firestone.....             |                      |                                   | L. B. Domenico  | Fan                 | U. P.                |
| Firestone.....       | Louisville Coal & Land Co., Firestone..... |                      |                                   | D. Rotolo       | Fan                 | U. P.                |
| Frederick Slope..... | Frederick Coal Co., Denver.....            |                      |                                   | J. C. Williams  | Fan                 | U. P.                |
| Golden Ash.....      | Cons. Coal & Coke Co., Denver.....         | C. L. Baum           |                                   | C. W. Smith     | Fan                 | U. P.                |
| Grant.....           | St. Vrain Coal Co., Frederick.....         |                      |                                   | E. Saunders     | Fan                 | .....                |
| Ideal.....           | Ideal Coal Co., Erie.....                  |                      |                                   | Phineas Woolley | Fan                 | .....                |
| Last Dollar.....     | Last Dollar Coal Co., Erie.....            |                      |                                   |                 | Nat.                | .....                |
| Peerless.....        | Peerless Coal Co., Frederick.....          |                      |                                   | Emil Debouter   | St. jet             | .....                |
| Russell.....         | Russell Coal Co., Denver.....              | W. E. Russell        |                                   | Wm. Sharp       | Fan                 | .....                |
| Shamrock.....        | Shamrock Coal Co., Erie.....               |                      |                                   | Thos. Morgan    | Fan                 | .....                |
| State.....           | State Coal Co., Erie.....                  |                      |                                   | D. L. Jones     | Nat.                | .....                |

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