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REPORT

OF THE

DEPARTMENT OF MINES

OF PENNSYLVANIA

PART I—ANTHRACITE

1908

HARRISBURG:

C. E. AUGHINBAUGH, PRINTER TO THE STATE OF PENNSYLVANIA

1909



LETTER OF TRANSMITTAL

Department of Mines,
April 27, 1909.

To His Excellency, Edwin S. Stuart, Governor of Pennsylvania:

Sir: In compliance with the Act of Assembly of April 14, 1903, I beg to submit herewith, for transmission to the General Assembly, the report of the Department of Mines for the year ending December 31, 1908. Part I covers in detail the operations in the twenty Anthracite Districts; Part II the operations in the twenty Bituminous Districts, as returned by the Inspectors. Observations and suggestions are also offered relative to mining subjects.

Respectfully submitted,

JAMES E. RODERICK,
Chief of Department of Mines.



REPORT

OF THE

DEPARTMENT OF MINES

INTRODUCTION

The anthracite coal industry for the year 1908 had an unusually successful period as compared with the other industries of the country. The production of coal amounted to 83,543,243 net tons, which almost equalled the production of 1907 when the high water mark was reached with an output of 86,056,412 net tons. Unquestionably both the operators and the miners in the anthracite region are extremely fortunate in that they produce a commodity that is now a household necessity with a steady market. No matter how seriously financial depression may interfere with other industries, the anthracite coal trade moves along but little disturbed by outside influences. The unexpected phase of this trade was the great demand for the steam sizes. In view of the general depression prevailing in all lines of manufacture during the year this demand was rather surprising. It showed very conclusively, however, that there is now a constant market for this product of the mines that a few years ago was deemed valueless.

The history of the bituminous trade during the year 1908 presents a marked contrast. The production decreased from 149,559,047 net tons in 1907 to 114,937,375 net tons, a difference of 34,621,669 net tons. The prolonged drought of the summer and fall interfered considerably with the operations in both the anthracite and bituminous regions and reduced the tonnage to some extent. Labor was plentiful, however, the car supply was better than it has been for many years, and stoppages of work arising from differences between the employer and the employe were infrequent and not of serious proportions.

In the anthracite region the wage agreement, first adopted in 1903 and renewed in 1906, will expire April 1, 1909, and whether or not it will again be renewed for a period of three years is uncertain, but it is very probable that both sides interested in this great matter will meet in the spirit of fairness and the result will be satisfactory.

A regrettable feature of the bituminous trade was the low price at which some of the operators sold their coal, for it has become a well established truism among coal people that it is better to sell less coal and receive higher prices.

A certain amount of agitation and unrest is noticeable among the operators in the bituminous region, owing to the possible action of Congress in putting coal on the free list. Free trade with Canada in this respect is deemed by many to be desirable, but free coal from other countries of the world would be a most serious blow to the basic industry of the United States and would be a national calamity. The coal industry is certainly entitled to protection as well as any other industry, and it is hoped that Congress, having the matter in its charge, will give the trade what it needs.

Wage agreements were signed in the Central and Pittsburg districts of the bituminous region and the outlook for continued peace between the operators and the employes for the future is most reassuring.

An unusual event of the year was the importation from Europe of three expert mining men to make investigations and recommendations regarding conditions in the mines in this country. The suggestions and recommendations of these experts are included and commented upon in this report.

COAL PRODUCTION IN PENNSYLVANIA

The table herewith shows the actual number of days worked in each district during 1908 and the average daily production; also the total average production per day for the region, 340,651 tons. Assuming that the mines had worked an average of 280 days, the total anthracite production would have been 95,382,280 tons, and if it had been possible to work 300 days, the production would have been 102,195,300 tons. The table also shows the production of each district per day on the same basis. In arriving at the average number of tons produced per day, the total number of days was divided into the total production of each mine in each district.

Districts	Average number of days worked in breakers	Average production in tons per day *	Estimated annual production for 280 days *
First, -----	180	18,212	5,099,360
Second, -----	235	20,395	5,710,600
Third, -----	180	22,393	6,270,040
Fourth, -----	213	16,303	4,564,840
Fifth, -----	195	18,497	5,179,160
Sixth, -----	193	21,192	5,933,760
Seventh, -----	178	26,642	7,450,760
Eighth, -----	197	19,534	5,469,520
Ninth, -----	198	26,744	7,488,320
Tenth, -----	228	16,745	4,688,600
Eleventh, -----	205	22,678	6,349,840
Twelfth, -----	217	13,506	3,781,680
Thirteenth, -----	213	13,747	3,849,160
Fourteenth, -----	234	10,793	3,022,040
Fifteenth, -----	218	14,038	3,930,640
Sixteenth, -----	206	11,256	3,151,680
Seventeenth, -----	235	15,988	4,476,640
Eighteenth, -----	224	12,390	3,469,200
Nineteenth, -----	226	11,629	3,258,920
Twentieth, -----	238	7,959	2,228,520
Totals, -----		340,651	95,382,280

*Production from washeries not included.

MINE DISCIPLINE

One of the important factors in the safe and successful operation of a coal mine is discipline. This applies alike to officials and workmen. Discipline, when enforced intelligently, compels closer attention to duty, a stricter compliance with the spirit of the mine laws and less haste in the performance of work. Discipline is the watchword of success in all lines of industry, but it has a special significance in the mining of coal because of the dangers inherent to the occupation, which are greatly augmented by haste, carelessness, indifference and inattention to the rules of safety. The question of discipline is one that every year becomes more important as the mines increase in number and depth and difficulty of operation. The mine operators, in many cases, make an honest effort to comply with the laws that relate to the safety and welfare of the employes. The equipment of the mines is generally complete and efficient, and due regard is given to the ventilation and other matters that have a bearing upon the conditions of safety, but the enforcing of discipline is a matter that is still open to criticism.

The chief obstacles that confront the operator are the indifference and carelessness of some of the officials in direct charge of the mine and the ignorance, carelessness and recklessness of some of the workmen. The officials, when in a hurry, are frequently guilty of infractions of the law that would be censured if committed by any of the workmen. For instance, an official—manager, superintendent, mine foreman or fire boss—may ride up a slope in a coal car, which is contrary to law, and his only excuse is that he is in a hurry. Often

when an official sees a workman derelict in his duty or violating some law of safety, he will merely reprimand him instead of discharging him, as he should do, because he knows that some other operator will at once hire him, and as he needs workmen he thinks he might as well retain him. In many ways the officials take chances that are hazardous and that are detrimental to the discipline that should be exercised over the workmen. On the other hand, the workmen frequently violate the laws because they have become accustomed to the dangers that surround them and are consequently indifferent to the results that may follow their failure to exercise care and discretion. They make cartridges while the lights are burning on their hats, throw dynamite on a shovel over a lamp, work under overhanging rock in imminent danger of being crushed and maimed, and continue to load cars before setting the necessary props or timbers.

These acts of thoughtlessness are all deplorable, and the only remedy is to be found in more rigid discipline.

The strict discipline maintained in the European mines is one of the secrets of the steadily decreasing death-rate from accidents, notwithstanding that the work there is done under natural conditions said to be more dangerous than those that exist in Pennsylvania. Perhaps it is impossible to prevent the Pennsylvania miner from doing his work rapidly, but the discipline in the mines should be such that the provisions of the law and the rules of the mine relating to safety are at all times rigidly enforced, and there should be instilled in the minds of all classes of employes a wholesome fear of deviation from or infringement of the law and rules. Discipline should begin with the general manager and extend to all the officials under him to the fire boss. It should be the duty and the endeavor of every official to exact strict compliance with the rules of the mine and the provisions of the mine law from all employes down to the door boy. The penalty for violation should be severe, and punishment should follow without unnecessary delay.

EDUCATION OF MINE EMPLOYEES

There is at present a great interest being manifested in the education of persons employed in and about the coal mines. To meet this condition many schools have introduced special courses of study, and some of the companies have instituted courses of lectures. There seems, in fact, to be a rapidly growing appreciation of the necessity for greater efficiency among this class of workers.

In the development of the art of coal mining in America the scientific side has heretofore been largely neglected, but recently there has been a general awakening to the fact that attention should be given to the theoretical and technical education of the mine workers as well as their practical education. The opportunities for advancement are many for persons properly equipped for this work, and a greater realization of this fact is impelling many persons to seek a more thorough education. In no other industry are the requirements of practical knowledge greater than in coal mining. In nearly all the coal mining states mine inspectors, mine foremen and assistant mine foremen must pass a rigid educational test before they can receive certificates

qualifying them to serve in their respective positions. A better and more comprehensive training of these men would no doubt result ultimately in a still higher grade of efficiency.

The coal output of the United States has been increasing at the rate of 10 per centum a year or 100 per centum in every decade for sometime past, with a corresponding increase in the number of miners and mine officials. It is obvious that under such conditions there must be a better and more efficient class of miners and mine officials to meet the ever-increasing problems of operation. In fact, there exists at this time a very urgent demand among the coal companies for competent officials. There are in Pennsylvania probably 10,000 persons holding official positions in the mines of greater or less responsibility, and the desire to obtain these positions should be an incentive to the acquiring of more thorough education on the part of the mine worker. It is doubtful if any other industry offers as great opportunity for advancement from the lowest position to the highest. As Pennsylvania holds a pre-eminent place in the coal trade of the world, this matter has for her a peculiar significance.

By invitation of the United States Geological Survey three foreign experts came to the United States last year to investigate mining conditions. In the report subsequently made by them they dwelt upon the necessity for more technical training among mine workers. The natural inference from their report would be that no attention had been given to this matter in this country, and, while it has not received the attention justified by the importance of the subject, there has nevertheless been some excellent work done along this line. It is elementary in its character, but the results obtained prove conclusively its efficiency.

The proper terminology for this method of instruction is secondary mining education—a system devised for mine foremen and assistant mine foremen—a most important phase of education, the advisability and practicability of which cannot be questioned. It is a part of the very general movement for industrial education that has been so prominent in America in recent years, and which had its inception in the coal regions of Pennsylvania thirty years ago. The pioneer in the movement for better education among the mine workers was Mr. Eckley B. Coxe, of Drifton, Pennsylvania. In 1879 Mr. Coxe, who at that time was one of the foremost mining men in the anthracite region, outlined a school for men and boys and it was established at Drifton and has been in continuous operation ever since. The school, however, soon after was moved to Freeland, where it now occupies an excellent modern building. Courses in elementary mathematics, physics, chemistry, mechanical drawing, first aid to the injured, and the science of mining, are conducted. The school is at present supported by the widow of Mr. Coxe and other contributors. At this institution many men, young and old, have received their training for the examinations as mine inspector, mine foreman and assistant mine foreman, and a number of young men have received preliminary training for entrance into technical institutions of higher grade. This school has done a great deal of good, and many men who have risen to high positions in life look back upon it with great affection. The courses have developed until there is now not only a night school with the elementary courses, but also a day school with preparatory courses.

The secondary mining education in most cases covers short courses in mining colleges, varying in length from a few weeks to two years. Night courses are also held in many sections under the auspices of the Y. M. C. A. These institutions give courses especially adapted to the needs of miners and foremen, and their work in the bituminous and anthracite regions of the State has been of a most beneficent character.

This work has been very efficiently developed by Mr. C. L. Fay, special Y. M. C. A. secretary for the coal regions of Pennsylvania. An important part of the work is the holding of general and district mining institutes at which papers are read and discussed, and out of these institutes has been developed the system of night classes which are taught by mining engineers, superintendents, or other competent local teachers, the text books used being those published by the International Textbook Company of Scranton. The work of the Y. M. C. A. is extremely popular and great good will no doubt result from this particular phase of education.

Another means of instruction and a most popular and comprehensive one is the correspondence method as conducted by the International Correspondence Schools of Scranton. The beneficial results of this method are unquestionable. It offers a successful means of obtaining a technical knowledge of mining to men who have no other way of obtaining such knowledge. Secondary education has been largely local in its character, except that carried on by the Scranton Schools. A brief history of the work of this institution is appended to this article.

Lecture courses instituted by the mining companies also afford education along this line. Many of the lectures are illustrated with stereopticon views and the subjects include the most practical topics concerning mining. The Philadelphia and Reading Company has for several years carried on a series of lectures for the benefit of their employes. Other companies are also considering the advisability of adopting methods by which they can induce the men in their employ to prepare themselves for advancement in their work. This movement along educational lines, it is pleasing to note, is popular not only with the employers but with the employes, and the fact will hardly be disputed that it will be mutually beneficial.

The Lehigh Valley Coal Company in 1908 inaugurated a system of study through the medium of night schools that has been followed with most gratifying results. This method gives assistance to the workers about the mines who are ambitious to improve their conditions through the study of the theory of mining and to thus fit themselves for positions of responsibility. On the part of the company it was a practical business proposition. The company desired to obtain the most competent men possible for all positions, from the lowest to the highest, from fire boss to superintendent and manager, and recognizing the fact that their men needed more education in order successfully to fill these positions, these schools were opened. Instructors are engaged to take charge of the work of the students, who are all students of the International Correspondence Schools. General Manager S. D. Warriner, in speaking on this subject, said that the results of these tentative efforts had been very successful and no doubt the company would open a number of similar schools as soon as possible. The experiment is being watched with great interest by the entire mining community.

The great change that has taken place in the character of the workmen during the past few years makes the necessity for better education imperative. Many of the old workmen have moved away and others have entered the professions of law and medicine. This is particularly true of the younger generation, and their places in the community are being filled by new population from the agricultural sections of Europe, an uneducated and ignorant class so far as mining is concerned. More than this, coal mining that in years gone by was a very simple proposition is now a most complex problem.

It would be a wise thing to include in all courses of secondary education work the study of elementary English, particularly among foreigners. This branch, we think, should be given a prominent place in any curriculum.

In looking at this matter in a broad way one is impressed with its importance to all the interests concerned in mining and enjoys a feeling of satisfaction in realizing that the men about the mines are not only being offered opportunities for improvement, but are accepting them in a spirit of appreciation. With the present opportunities no mine worker, however humble his position, need be discouraged from making an endeavor to rise to a place of importance and prominence in the mining industry.

MINING EDUCATION

As Carried on by the International Correspondence Schools of Scranton, Pa.

In connection with the question of education of mine employes, it is interesting to know that there has been developed within the State of Pennsylvania an institution for promoting and imparting technical instruction to men and boys at their homes so that without leaving their usual daily employment they may obtain a thorough training in many of the branches of knowledge pertaining to American industrial life. This institution is known as the International Correspondence Schools located at Scranton. It is a matter of interest to the mining industry as well as a cause for special congratulation by Pennsylvanians that this far-reaching development in connection with education has grown out of the mining industry of our State.

When the revision of the anthracite mine law of Pennsylvania was made in 1885 by a commission of operators, miners and inspectors, of which the present Chief of the Department of Mines was a member, a clause was inserted providing that mine foremen and fire bosses must hold certificates based upon an examination in practical and technical mining subjects.

At that time Mr. T. J. Foster was editing the Mining Herald in Shenandoah, Pennsylvania, a weekly publication, in which there frequently appeared technical articles written by well known engineers such as Mr. C. M. Percy, of England, Mr. Robert Mauchline, Mr. W. D. Owens, and others. These articles were intended to assist the ambitious and studious men about the mines, and after the passage of the law of 1885 they were especially designed to assist those wishing to fit themselves to pass the State examinations provided by that law.

In 1887 the Mining Herald was changed to the Colliery Engineer and became a distinctly technical mining publication. In 1888 the headquarters were moved to Scranton, Pennsylvania. The correspondence columns of the Colliery Engineer were made to appeal especially to persons desiring to prepare themselves for the State examinations for certificates as mine foremen and assistant mine foremen. Such persons were urged to ask questions through the columns of the paper upon subjects pertaining to mining, or to answer questions asked by others, the questions and answers being published each month. The paper thus formed an open court for an exchange of views upon mining topics, and this feature soon became so popular that it was apparent that this medium alone could not supply the instruction and assistance needed by men desiring to fit themselves for the State examinations. Consequently, in August, 1891, the Colliery Engineer Company began the preparation of leaflets for the use of men studying to pass the examinations for foreman, assistant foreman and fire boss.

The first student was enrolled October 16, 1891, and between that time and January 1, 1909, nearly 40,000 persons had taken up courses in mining by correspondence with the International Correspondence Schools alone. These students were scattered throughout every state and territory in the United States, and in fact every country in the world, and comprised persons of all classes about the mine from the door boy, who is at the lowest rung of the mining ladder, to the managers and presidents of some of the largest mining companies of the United States, as well as many men interested in mining merely from the financial standpoint.

The correspondence courses of study are adapted to all classes of persons employed in and about the mines, no matter how limited their preliminary education may be, provided they can read and write. Consequently, each course begins with elementary arithmetic and advances step by step throughout the other branches of elementary mathematics, and then on through the advanced subjects connected with practical mining, each step being completed before the next higher one is taken.

No attempt has been made to use ordinary textbooks, but special textbooks have been prepared differing from most other technical books in presenting the subjects treated of in a way that is easily understood by persons who have not had the advantages of systematic schooling.

Each student receives the lesson papers to be studied in the form of small pamphlets that he can carry in his pocket wherever he goes, and many a man in the mines uses his noon hour to study. Each student also receives what is called a Mining Reference Library, systematically arranged and indexed and containing from three to nine volumes, depending upon the courses taken. In this way a vast amount of the highest grade mining literature has been widely disseminated, and if correspondence instruction had done nothing else than to distribute throughout the entire mining world over 100,000 bound volumes of the very best mining literature obtainable, its inauguration would have been well worth while.

Out of the first 500 students who were mostly miners at the face when they enrolled in the International Correspondence Schools between October, 1891, and May, 1892, many are now coal operators,

mining engineers, mine inspectors, mine superintendents and mine foremen.

A very large number of men now holding official and responsible positions in the several coal mining states are now, or have been, students of mining by correspondence, and many of them owe their certificates of competency and attribute their success solely to this method of instruction.

At various times the chiefs of the departments of mines in the several states, and mine inspectors, members of the examining boards, and employers of men who have studied by correspondence, have in public addresses and in printed articles expressed their opinion of the value of such instruction in terms of the highest appreciation.

A man who has sufficient stamina to give up his nights to study after a day of hard labor in the mines and to carry on a difficult course of study, very often under unfavorable surroundings, marks himself as a man of determination and backbone—a man of ambition who is likely to succeed. Such a man is usually more reliable, has more fixity of purpose, takes more interest in the affairs of his employer, is more observant, and is apt to be a generally better all around man.

Persons who have pursued a systematic course of study under careful guidance almost invariably give better answers and show better reasoning power when they appear before the State board of examiners.

Correspondence instruction has therefore proved to be a distinct boon to the ambitious mine worker, and while no system of instruction can make the impractical man practical, nor furnish tact to the factless man, it has put in the way of every ambitious man a means of improving his condition.

Many persons through diffidence will not attend night schools or avail themselves of the usual methods of education. Many do not even have access to the night schools. To all such persons correspondence instruction offers the only practical method of securing an education. That the method is practical is proved by the thousands of examples of persons who have fitted themselves for positions of responsibility solely by the correspondence method of instruction.

THE ELECTION OF MINE INSPECTORS

The Department has always been of the opinion that the election of mine inspectors by the people would be a most dangerous and pernicious practice, one that would lower the dignity of the office and be detrimental to the best interests of the mining community. To throw these important offices open to the whim and caprice of the political element in the different districts is to place a severe handicap upon the inspectors in the discharge of their duty. If they would retain their places they must of necessity cater to or at least listen to the political leaders, and no matter how conscientious they may be or how earnestly they may desire to enforce the laws governing the mining industry, occasions will arise when the opposing influences at work are so powerful that they must yield the point at issue or incur the displeasure of those who will later on endeavor to have them deposed.

The evil effects of this practice are far-reaching. They not only hamper the inspector in the discharge of his duties as a State officer who is supposed to look after the condition of the mines and the safety of the employes, but they are also felt in connection with the work of the mine foremen's examining board of which the inspector is a member. He is oftentimes obliged to acquiesce in passing candidates for this important position who are utterly unqualified to fill it properly. He must act contrary to his best judgment, because he knows full well the danger of incurring the active hostility of the other members of the board. This is truly a deplorable condition of affairs.

This matter was referred to in the annual report of the Department for the year 1903 as follows:

"During late years considerable dissatisfaction was manifested regarding the inspectors, especially in Schuylkill county, and this feeling was intensified against one of them who, from mistaken judgment as to his duty, committed an act that, while not a violation of the law, was repugnant to the miners. This antagonistic feeling against the inspectors was encouraged and kept alive to such an extent by a few interested persons, that the miners finally assembled in convention and passed resolutions calling upon the Legislature to amend the mining law so that the anthracite inspectors could be elected by the people. They believed that this would do way with all objectionable inspectors and remove all causes of complaint, and that it would also open an avenue for ambitious miners to become inspectors. The fact is, however, that the office of inspector has always been open to all miners qualified to fill it; but in all the years from 1870 to 1903 only one miner passed a successful examination before an examining board in the anthracite region. (The word 'miner' as used here means a man actually employed in cutting coal.) The reason for this is found in the fact that the operators have always advanced the most intelligent miners to be foremen and fire bosses, and many of them have become superintendents and general managers of large corporations. One of them has recently attained the presidency of one of the most prominent coal companies. It is from the class of miners who were foremen or superintendents that the anthracite inspectors have generally been selected, after a rigid competitive examination before a board composed of three miners and two mining engineers. With but one or two exceptions, the anthracite inspectors from 1870 to 1900 have been men of good moral character and practically and theoretically proficient. All the anthracite laws (1870, 1885 and 1891) have favored the miners in the formation of examining boards, as they have always had three-fifths of the membership of each board. They have therefore been able to control the actions of the boards, (and invariably the miners on these boards have acted as upright intelligent citizens as they are).

In compliance with the demands of the miners, the Legislature in 1901 amended Article II of the Anthracite Law of 1891, providing that after a certain date all inspectors should be elected by the people under the general election law of the State, after first having passed an examination and answered ninety per centum of the questions propounded. The election of mine inspectors by the people is unheard of in any other State in the Union, except Kansas, or in any other country of the world. * * * It is a most pernicious practice, as

it brings the applicant for an office created for the preservation of life and property into the vortex of political intrigue, and I sincerely hope the time will soon come when both the miners and operators will demand the repeal of this *part* of the law. * * * The evil effects of the election of inspectors may reach even to the selection of mine foremen and assistant mine foremen. The inspector is an ex-officio member of each examining board and there is reason to fear that in many cases poorly qualified candidates who possess some political influence may be treated with leniency not only discreditable to the board, but inimical to the interest of the miners and operators. Incompetency in the office of mine foreman or fire boss is a menace to the lives of the miners and the property of the operators. Upon the vigilance, care and efficiency of the mine foreman and assistant mine foreman depends largely the welfare of the mining interests, and I note with regret that during the past year certificates of qualification have been granted to men regarding whose incompetency there can be little doubt."

Since the above article was written in 1903 the fears entertained at that time have been more than realized. The inspectors have allowed the Examining Boards to pass scores of unfit men to act as foremen, the great majority of them to act as foremen in gaseous mines. The climax was capped in 1907, when one of the boards passed 92 out of 95 applicants. The other members of the board can always outvote the inspector, it is true, but if he is firm in his determination to pass only competent persons, it is probable that the other members would not insist upon granting certificates to those who were not competent. Unfortunately, however, the inspectors are deterred from exercising their independence and from acting as justly as they might desire in the matter, because of the fear they have that the other members of the board and the applicants and their friends may at some future time use their influence to defeat them for re-election.

I wish to state here that the clause in the law that provides for the election of inspectors should be annulled, and thereafter the men passing the examination for certificates as foremen and fire bosses would undoubtedly be more competent to care for the safety of the lives of the miners and of the property of the operators. It may properly be mentioned here that, as Chief of the Department of Mines, I have no authority to withhold a certificate from any person who is recommended by an examining board as competent, even though I have ample proof in the examination papers that he should not be rated as answering correctly more than forty per centum of the questions asked, instead of over ninety as required.

There is no valid reason why the inspectors of the Anthracite counties of this Commonwealth should not be treated as the Bituminous inspectors are treated, and therefore it is greatly to be desired that the present provision in the anthracite law be repealed and that the Governor be empowered to appoint one board of examiners for the Anthracite counties to meet once every four years to examine applicants for inspectors, who shall be declared qualified upon answering correctly ninety per centum or over of the questions propounded, and the persons having the highest percentages then to be selected to fill the positions. Vacancies that may occur thereafter shall be filled by the selection of those candidates having the next highest averages.

In case a vacancy should occur and there be no person on the eligible list, the board could meet again and hold a special examination.

The Anthracite inspectors, smarting under the injustice of the present anthracite law relating to the election of inspectors, prepared a bill providing for the appointment of inspectors by the Governor. This bill was codified from the Bituminous Mine Law and prepared for introduction in the Legislature during the session of 1909. The bill is printed herewith.

AN ACT

To further provide for the health and safety of persons employed in and about the anthracite coal mines of Pennsylvania and for the protection and preservation of property connected therewith; and to provide for two additional mine inspectors, to provide for an examination by a State Board of Examiners, fixing the term of office and salary of the mine inspectors, defining their duties and other matters pertaining thereto.

ARTICLE I

Section 1. Be it enacted by the Senate and House of Representatives of the Commonwealth of Pennsylvania in General Assembly met and it is hereby enacted by authority of the same, That this act shall apply to every anthracite coal mine or colliery in the Commonwealth of Pennsylvania, provided that the said mine or colliery employs more than ten persons.

ARTICLE II

Section 1. The Governor shall appoint during the month of January, one thousand nine hundred and ten, and every four years thereafter, five citizens of this Commonwealth of good repute, to be known as the Mine Inspectors' Examining Board, whose duty it shall be to examine applicants for the office of inspector in the anthracite coal region of this Commonwealth. Two of the members of said Board shall be mining engineers, and three of the members shall be miners in actual practice in anthracite mines generating explosive gas and shall have had at least five years' practical experience as miners in the anthracite mines of Pennsylvania. Applicants for appointment on the said Examining Board shall be at least thirty years of age. Each member of the Examining Board shall receive the sum of ten dollars a day for each day actually employed and all necessary expenses incurred in carrying out the provisions of this act, which shall be paid out of the State Treasury on warrant of the Auditor General issued upon the presentation of vouchers properly made out and sworn to by each member of the board and approved by the Chief of the Department of Mines. The Examining Board is hereby authorized to engage the services of a clerk, who shall be a stenographer.

Any vacancy that may occur in the membership of the Examining Board shall be filled by the Governor according to the provisions of this section.

Section 2. The said Examining Board shall meet on the first Tuesday in March, one thousand nine hundred and twelve, in the city of Harrisburg, and every four years thereafter, to examine applicants for the office of inspector. Two weeks previous to the aforesaid time the Board shall meet to prepare questions and formulate rules for conducting the examination. The Board may also be convened by the Governor at any other time for the purpose of filling vacancies or performing any other necessary work.

The Board after being duly organized shall take and subscribe to, before any officer authorized to administer the same, the following oath, namely, "We, the undersigned, do solemnly swear (or affirm) that we will perform the duties of examiners of applicants for appointment as inspector of mines to the best of our ability, and that in recommending or rejecting said applicants we will be governed by the evidence of their qualifications to fill the position and not by any consideration of political or personal favor, and that we will certify all whom we may find qualified according to the true intent and meaning of this act and none other."

The oaths of the members of the Examining Board shall be filed in the Department of Mines as public documents.

Section 3. The qualifications of candidates for the office of inspector shall be certified to the Examining Board and shall be as follows: The candidates shall be citizens of Pennsylvania, of temperate habits, of good repute as men of personal integrity, in good physical condition, and shall be between the ages of thirty and fifty years: Provided, however, That any inspector elected under the provisions of the act of June eight, one thousand nine hundred and one, or appointed under the provisions of this act, shall be eligible for re-appointment even if beyond fifty

years of age if in good physical condition. The candidates shall have a knowledge of the different systems of working coal seams and shall have had at least ten years' practical experience in anthracite mines, five years of which (immediately preceding their examination) shall have been in anthracite mines of this Commonwealth. Each candidate must furnish the Examining Board with positive and satisfactory evidence of having had five years' practical experience as a miner in the anthracite mines of Pennsylvania; that is, he must have had five years' experience in the actual practice of mining, blasting, cutting and loading coal, or, in lieu thereof, shall have served at least one year as State Mine Inspector. Candidates shall also have had practical experience with explosive gas and other dangerous gases found in coal mines, and upon examination shall give evidence of such theoretical as well as practical knowledge and general intelligence respecting mines and mining and the working and ventilation of mines as will satisfy the Examining Board of their capability and fitness for the duties imposed upon inspectors of mines by the provisions of this act.

Section 4. The principal examination shall be in writing and each applicant shall also undergo an oral examination pertaining to explosive gas, safety lamps, methods of ventilation and mine management. The questions and answers thereto in the oral examination shall be reported verbatim by an expert stenographer and typewritten fully to assist the Board in the work of rating the qualifications of the candidates. Candidates who shall make a general average of at least ninety per centum shall be deemed successful. The manuscripts and other papers of all applicants in the principal examination, together with the tally sheets and the correct solution of each question as prepared by the Examining Board, and also the stenographer's report of the oral examination, shall be filed in the Department of Mines as public documents.

The Examining Board, or at least four members thereof, shall certify to the Governor and also to the Department of Mines the names and percentages of all successful candidates who are properly qualified under the provisions of this article to fill the office of inspector. A certificate of qualification prepared by the Chief of the Department of Mines shall be issued to each successful candidate.

The Examining Board shall as soon as practicable after the examination furnish to each applicant on printed slips of paper a copy of all questions (oral and written) given at the examination, marked, solved right, imperfect or wrong, as the case may be.

Section 5. The Governor shall from the names certified to him by the Examining Board commission one person to be inspector for each district in pursuance of this act, whose commission shall be for a full term of four years from the fifteenth day of May following the regular examination: Always provided, however, that the candidate or candidates highest in percentage in the examination shall have priority in being commissioned for a full term or an unexpired term over candidates of lower percentage. Each inspector now holding office under the provisions of former acts may continue in office until May fifteen, one thousand nine hundred and twelve. After the regular examination in March, one thousand nine hundred and twelve, the Chief of the Department of Mines shall have the right to assign the inspectors to the districts for which in his opinion they are best fitted.

Section 6. When a vacancy occurs in said office of inspector, the Governor shall commission for the unexpired term from the names on file in the Department of Mines the person highest in percentage (but no person shall be commissioned who has not received an average of at least ninety per centum). When the number of candidates who have received an average of at least ninety per centum shall be exhausted, the Governor shall cause the aforesaid Examining Board to meet for a special examination and to examine the person or persons who may present themselves for examination in accordance with section three of this article, and the Board shall certify to the Governor and also to the Chief of the Department of Mines the names of all applicants who have made a general average of at least ninety per centum in said examination as provided for in section four of this article, one of whom shall be commissioned by the Governor according to the provisions of section five of this article for the office of inspector for the unexpired term. In conducting the special examination the Board shall comply with all the requirements of sections three and four of this article.

Section 7. After the passage of this act the salaries of the inspectors shall be as follows: Inspectors who have served eight years shall receive four thousand dollars a year; inspectors who have served four years shall receive three thousand five hundred dollars a year; inspectors who have served less than four years shall receive three thousand dollars a year; to be paid quarterly by the State Treasurer on warrant of the Auditor General issued upon the presentation of voucher approved by the Chief of the Department of Mines.

Each inspector may also incur traveling expenses and such other expenses as may be necessary for the proper discharge of his duties under the provisions of this act, which shall be paid quarterly by the State Treasurer on warrant of the Auditor General issued upon presentation of vouchers properly made out and sworn to by the inspector and approved by the Chief of the Department of Mines. Each inspector shall have an office in his district, which may be at his place of residence provided that a suitable room approved by the Chief of the Department of Mines be set apart for that purpose.

The Chief of the Department of Mines shall have authority to procure for the inspectors on their request furniture, instruments, chemicals, typewriters, stationery and all other necessary supplies, which shall be paid for by the State Treasurer on warrant of the Auditor General upon presentation of vouchers approved by the Chief of the Department of Mines.

All furniture, instruments, plans, books, memoranda, notes and other materials pertaining to the office of inspector shall be the property of the State and shall be delivered by the inspector to his successor in office.

Section 8. The inspectors shall be allowed all necessary expenses incurred by them in enforcing the several provisions of this act in the respective courts of the Commonwealth (provided they have the consent of the Department of Mines before such expense is incurred), the same to be paid by the State Treasurer on warrant of the Auditor General issued upon presentation of itemized vouchers approved by the court before which the proceedings were instituted and also by the Chief of the Department of Mines.

Section 9. Each inspector shall, before entering upon the discharge of his duties, give bond in the sum of five thousand dollars with sureties to be approved by the president judge of the district in which he resides, conditional for the faithful discharge of his duties, and shall take an oath or make affirmation that he will discharge his duties with impartiality and fidelity to the best of his knowledge and ability. But no person who is acting as manager or agent of any coal mine, or as mining engineer, or who is interested in operating any coal mine, shall at the same time act as inspector under this act.

Section 10. In case the inspector becomes incapacitated to perform the duties of his office or is granted a leave of absence by the Chief of the Department of Mines, it shall be the duty of the Governor at the request of the Chief of the Department of Mines to appoint temporarily to the office the person standing highest on the eligible list of applicants filed in the Department of Mines. The temporary inspector shall act until the regular inspector is able to resume the duties of his office and shall be paid in the same manner as hereinbefore provided for the payment of the regular inspector.

Section 11. Each inspector shall devote the whole of his time to the duties of his office. It shall be his duty to examine each mine in his district as often as possible, giving special attention to all mines generating explosive gas and to other mines where unusual dangers may be suspected to exist, and to see that all the provisions of the anthracite mine laws are observed and strictly carried out, especially those that demand that the air current be carried to the working faces. He shall keep in his office a record of all examinations of mines showing the condition in which he finds them, especially with reference to ventilation and drainage, the number of persons employed inside each mine, the extent to which the law is obeyed and the progress made in the improvement of mines. He shall keep a record of all serious accidents, showing the nature and causes thereof and the number of deaths resulting therefrom.

Section 12. It shall be the duty of the inspector after an examination of any mine to make out a written, or partly written and partly printed, report of the condition in which he finds it and to post the said report or to forward the same to the superintendent of the mine within five days from the date of making the said examination, to be posted by him immediately upon receiving the same in the office at the mine or in some other conspicuous place, where it shall remain for one year open to examination by any persons employed in or about said mine. The report shall show the date of the inspection, the number of cubic feet of air in circulation, where the measurement of the air was made and the measurement of air at the cross-cut of one or more chambers in each gangway, and also at any other place requested by the Chief of the Department of Mines. The report shall contain such other information as the inspector may deem necessary.

If the inspector discovers any chamber, gangway, airway or other working places being driven in advance of the air current or any matter, condition, thing or practice contrary to the requirements of the anthracite mine law, he shall order the workmen in such places to cease work at once until the law is complied with.

Section 13. To enable the inspector to perform the duties imposed upon him by this act, he shall have the right at all times to enter any mine in his district to make examinations or obtain information, and upon the discovery of any violation of the anthracite mine law he shall institute proceedings against the person or persons at fault. In case any mine or part of a mine is in the judgment of the inspector in so dangerous a condition as to jeopardize life or health, he shall at once notify the Chief of the Department of Mines, who shall immediately direct two or more of the other inspectors to accompany promptly the said inspector to the mine wherein said dangerous condition is alleged to exist. The inspectors shall make a full investigation, and if they agree that there is immediate danger they shall direct the superintendent of the mine in writing to remove forthwith said dangerous condition. If the superintendent fails to do so, the inspectors shall immediately apply in the name of the Commonwealth to the court of common pleas of the county in which said mine is located or to a judge of said court in chambers, for a writ of injunction to enjoin the suspension of all work in and about said mine. Whereupon said court or judge shall at once proceed to hear and determine the case, and, if the cause appear to be sufficient after hearing the parties and their evidence as in like cases, shall issue its writ to restrain the working of said mine until all cause of danger is removed, and the costs of said proceedings

shall be borne by the owner, lessee or agent of the mine: Provided, That if said court shall find the cause not sufficient then the case shall be dismissed and the costs shall be borne by the county wherein said mine is located: Provided, also should any inspector find during his inspection of a mine or a part of a mine such dangerous conditions existing therein that in his opinion any delay in removing the workmen from such dangerous places might cause loss of life or serious personal injury to the employes, the said inspector shall have the right to temporarily withdraw all persons from such dangerous places until the foregoing provisions of this section can be carried into effect.

Section 14. Each inspector shall make the following reports to the Chief of the Department of Mines on blank forms provided for that purpose. Not later than the tenth of each month he shall make a report of all fatal and serious non-fatal accidents that have occurred in his district during the preceding month, stating the date, nature and cause of each accident and placing the responsibility therefor, together with the name, age, occupation and nationality of each person killed and injured, and whether married or single, and the number of widows and orphans left, which report shall be recorded and filed in the Department of Mines and included (or a synopsis of the same) in the annual report of said Department. Not later than the sixth of each month he shall make a report giving the name of operator and name and location of each mine inspected during the preceding month, with date of inspection, condition of mine, quantity of air in circulation at all points required by the Chief of the Department of Mines, and the number of persons employed in each split of air. Not later than the twentieth of February of each year he shall make an annual report, which shall briefly recapitulate the duties performed by him during the preceding year and briefly describe the condition of the mines in his district relative to ventilation, drainage and general sanitary arrangements as relating to the health, safety and welfare of the employes, and which shall also contain such suggestions or information of importance as he may deem necessary or as required by the Chief of the Department of Mines.

Section 15. The court of common pleas in any county or district, upon a petition signed by not less than fifteen reputable citizens, who shall be miners or operators of mines, and with the affidavit of one or more of said petitioners attached, setting forth that any inspector of mines is neglectful of or is incompetent to perform the duties of his office or that he is guilty of malfeasance in office, shall issue a citation in the name of the Commonwealth to the said inspector to appear on not less than fifteen days' notice, upon a day fixed, before said court, at which time the court shall proceed to inquire into and investigate the allegations of the said petitioners.

Section 16. If the court finds that the said inspector is neglectful of or is incompetent to perform the duties of his office or that he is guilty of malfeasance in office, the court shall certify the same to the Governor, who shall declare the office of said inspector vacant and proceed in compliance with the provisions of this act to fill the vacancy.

The costs of said investigation shall, if the charges are sustained, be imposed upon the inspector, but if the charges are not sustained they shall be imposed upon the petitioners.

Section 17. Under this act the anthracite counties of the Commonwealth shall be arranged into twenty-two inspection districts and it shall be the duty of the Chief of the Department of Mines to assign the inspectors to their respective districts. He shall also designate their places of abode at points as convenient as possible to the mines of their districts.

Section 18. With the consent of the Governor, the Chief of the Department of Mines may at any time re-district the anthracite counties and add to the number of inspectors if in his judgment the number should be increased.

Section 19. On or before the twenty-fifth day of January in each year the operator or the superintendent of every mine shall send to the inspector of the district a correct report specifying with respect to the year ending the thirty-first day of December preceding the name of the operator and officers of the mine, the number of tons of coal mined, number of different employes classified, and the total number of days worked during the year. The report shall be in such form and give such information regarding the mine as may be from time to time required and prescribed by the Chief of the Department of Mines.

Any person who neglects or refuses to perform the duties required of him by any section of this act or who violates any of the provisions or requirements thereof, shall be deemed guilty of a misdemeanor and shall upon conviction thereof in the court of quarter sessions of the county in which the misdemeanor was committed be punished by a fine not exceeding two hundred dollars or be imprisoned in the county jail for a period not exceeding three months, or both, at the discretion of the court.

Section 20. All laws or parts of laws inconsistent or in conflict with the provisions of this act are hereby repealed.

MINE FOREMENS' EXAMINING BOARDS

Being very much dissatisfied with the work of several of the Mine Foremen's Examining Boards in the anthracite region, on account of their passing so many incompetent persons, I had a bill prepared and introduced in the Legislature, the purpose of which was to bring about a reform in this work. The bill reduced the number of Examining Boards from thirteen to ten and placed two Inspectors on each Board, the latter provision making it impossible for any incompetent person to pass without receiving the vote of at least one of the Inspectors. In thus giving the Inspectors control of the Boards it was thought that a stop might be put to the passing of applicants who were not qualified, as the Department of Mines, having supervision of the Inspectors, could hold them responsible for all the applicants recommended for certificates of qualification. The bill is printed herewith.

AN ACT

To further provide for the health and safety of persons employed in and about the anthracite coal mines of Pennsylvania and for the protection and preservation of property connected therewith; to provide for the examination of mine foremen, assistant mine foremen and fire bosses; to provide for a State Board of Examiners, prescribing their duties and other matters pertaining thereto.

ARTICLE I

Section 1. Be it enacted by the Senate and House of Representatives of the Commonwealth of Pennsylvania in General Assembly met and it is hereby enacted by the authority of the same, That this act shall apply to every anthracite coal mine and colliery in the Commonwealth, provided the said mine or colliery employs more than ten persons.

ARTICLE II

Section 1. In order to maintain efficiency in mine management and to have a competent standard of qualifications among mine officials and to promote the health and safety of the employes, the Governor shall in the month of January of each year appoint a sufficient number of miners and operators, managers or superintendents, who, with the inspectors in office, shall comprise the Boards of Examiners to examine applicants for certificates of qualification as mine foremen, assistant mine foremen and fire bosses. Said miners and operators, managers or superintendents, must be citizens of this Commonwealth and at least thirty-five years of age. Each Board shall be comprised of two inspectors, who shall act ex-officio, one miner in the actual practice of mining, blasting, cutting and loading coal in anthracite coal mines, and one operator, manager or superintendent, who shall hold office for one year from date of appointment. The Chief of the Department of Mines shall designate the members who shall constitute the different Boards and shall name the places where the Boards shall hold the examinations. The miner and the operator, manager or superintendent appointed on each Board shall be from the district under the supervision of the two inspectors who are members of the Board. The Boards shall meet on the second Tuesday in May, each year, and shall give due notice for at least two weeks of the time and places where the examinations will be held.

Each Board shall organize by electing one of the inspectors chairman and the other inspector secretary, and after being duly organized the members shall take and subscribe to the following oath before an officer authorized to administer the same, namely:

"We, the undersigned, do solemnly swear (or affirm) that we will perform the duties of examiners of applicants for certificates of qualification as mine foremen, assistant mine foremen, and fire bosses; that we will not divulge or make known to any person any question prepared for an examination or in any manner assist any applicant to pass the examination, but will be governed by the evidence of the qualifications of applicants to fill said positions and not by any consideration of personal favor; and that we will certify all whom we may find qualified in accordance with this act and none other."

Any member of any Board of Examiners who shall divulge or make known any question prepared for an examination prior to such question being handed to the applicants at the examination, or in any manner assist any applicant to pass the examination, shall be deemed guilty of a misdemeanor and upon conviction thereof shall be fined two hundred dollars, or imprisoned for a term not exceeding one year, or both, at the discretion of the court trying the case.

Any vacancy that may occur in the membership of the Boards shall be filled by the Governor in accordance with the provisions of this section.

Section 2. The members of the Boards of Examiners appointed by the Governor, with the inspectors in office shall meet in the city of Harrisburg two weeks before the time set for the examination of applicants, for the purpose of discussing the general scope of the theoretical and practical questions to be given the applicants, and to adopt rules to govern the examinations and to decide any other important matters pertaining to their duties, and said Boards shall select a committee of six of their number comprising two inspectors, two miners, and two operators, managers or superintendents, to formulate a code of questions to be used at the examinations. The said committee shall select one of their members as chairman and one as secretary. The questions prepared by the said committee shall be printed under the personal direction of the chairman and the secretary of the committee and sent by them by express in sealed packages, each package containing a set of questions for each session, to the chairman of each Board of Examiners, who shall break the seal and open the package at the commencement of each session in the presence of the other members of the Board.

After the examinations of the applicants are over and before the several Boards meet to examine the papers of the applicants, the said committee of six shall meet again to prepare answers for the questions propounded, and these answers shall be sent to the chairman of each board to be used in rating the value of the answers given by the applicants. While preparing answers to the questions the committee is hereby authorized to engage the services of a clerk, who shall be a stenographer and whose compensation and mileage shall be the same as that of the members of the committee.

Section 3. Each member of each Board shall receive six dollars a day for each day actually employed, not exceeding twenty days in all, and mileage at the rate of two and a half cents a mile for each mile necessarily traveled in going from his home to the place of meeting and return by the shortest practicable railway route: Provided, That mileage shall be paid but once for each continuous session of the Board. By a continuous session is meant a session of not less than four days in each week: Provided, further, That the committee of six shall each receive additional compensation at the rate of six dollars a day for the time spent in preparing the questions and answers. Each member shall also be reimbursed for all other necessary expenses incurred by him in the discharge of his duties. Each Board of Examiners is hereby authorized to employ the services of a clerk, who shall be a stenographer and whose compensation and rate of mileage shall be the same as that of the members of the Board. The clerk of each Board shall on final adjournment send to the Chief of the Department of Mines properly attested vouchers for compensation and expenses of each member of the Board and also a voucher covering his own compensation and expenses, which vouchers shall be first approved by the chairman and the secretary of the Board. The Chief of the Department of Mines shall then approve said vouchers and transmit them to the Auditor General, who shall issue a warrant for their payment to the State Treasurer.

Section 4. Applicants must appear before the Board of Examiners of the inspection district wherein they reside. All persons who desire to attend the examination shall notify the chairman of the Board of their intention, if possible, not less than ten days prior to the day set for the examination. The Board shall inquire into the character and qualifications of the applicants who present themselves for examination.

Applicants for certificates of qualification as mine foremen shall be citizens of the United States and residents of Pennsylvania, of good moral character and of known temperate habits, at least twenty-five years of age, and shall have had at least five years' practical experience after eighteen years of age as miners who have been actually engaged in the practice of mining, blasting, cutting and loading coal in the anthracite mines of Pennsylvania. Applicants for certificates of qualification as assistant mine foremen shall be citizens of the United States and residents of Pennsylvania, of good moral character and of known temperate habits, at least twenty-one years of age, and shall have had at least three years' practical experience after eighteen years of age as miners who have been actually engaged in the practice of mining, blasting, cutting and loading coal in the anthracite mines of Pennsylvania. Applicants for certificates of qualification as fire bosses shall be citizens of the United States and residents of Pennsylvania, of good moral character and of known temperate habits, at least twenty-three years of age, and shall have had at least five years' practical experience after eighteen years of age as miners or men of general work who have been actually engaged in the practice of mining, blasting, cutting and loading coal in the anthracite mines of Pennsylvania, and their knowledge shall include some experience with explosive gas.

All applicants shall furnish the Board with certificates as to their character and temperate habits. The certificates shall also show the length of service in the different mines.

Certificates of qualification as mine foremen shall be granted to persons who have given to the Board of Examiners satisfactory evidence of their ability to perform the duties of mine foremen in gaseous mines and who shall have received an average of at least eighty per centum in the examination.

Certificates of qualification as assistant mine foremen shall be granted to persons who have given to the Board of Examiners satisfactory evidence of their ability to perform the duties of assistant mine foremen in gaseous mines and who shall have received an average of at least sixty-five per centum in the examination.

Certificates of qualification as fire bosses shall be granted to persons who have given to the Board of Examiners satisfactory evidence of their ability to perform the duties of fire boss in gaseous mines, after an oral examination in the presence of explosive gas.

Section 5. Before examination each applicant for a certificate of qualification as mine foreman, assistant mine foreman or fire boss, shall pay to the Board of Examiners the sum of one dollar and if successful two dollars additional for a certificate. All money received by the Board of Examiners for examination fees and certificates shall be transmitted to the Chief of the Department of Mines, who shall pay the same into the State Treasury less the cost of issuing and recording certificates.

Section 6. Each Board of Examiners, or at least three members thereof, shall certify to the Chief of the Department of Mines on forms furnished by him every person whose examination shall disclose his fitness for the duties of mine foreman, assistant mine foreman or fire boss, as above classified, and the Chief of the Department of Mines shall then prepare certificates of qualification for the successful applicants and send them to the chairman of the Board for distribution. Each certificate shall contain the full name, age and place of birth of applicant, and also the length and nature of his previous service in or about the mines. The certificates shall be in manner and form as prescribed by the Chief of the Department of Mines.

Section 7. Each Board of Examiners shall send to the Chief of the Department of Mines the answers and all other papers of the applicants, together with the tally sheets and a list of the questions and answers as prepared by the committee selected by the Boards, which shall be filed in the Department of Mines.

Section 8. It shall be unlawful for any operator, manager or superintendent to employ as mine foreman or assistant mine foreman or fire boss any person who has not obtained the proper certificate of qualification or service required by this act: Provided, that all persons holding certificates of qualification as mine foreman granted under the provisions of the act of June two, one thousand eight hundred and ninety-one, may continue to serve; and provided further, that any person acting as mine foreman by virtue of holding a certificate of service granted previous to the passage of the act of June two, one thousand eight hundred and ninety-one, may continue to serve at any mine where the general conditions affecting the health and safety of the persons employed do not differ materially from those at the mine in which he was employed when said certificate was granted, which question shall be decided by the inspector of the district; and it shall be unlawful for any operator, manager, superintendent or mine foreman to employ as fire boss any person who has not obtained the proper certificate of qualification required by this act: Provided, that all persons holding certificates of qualification as fire boss granted under the provisions of the act of June two, one thousand eight hundred and ninety-one, may continue to serve.

Section 9. If any person shall forge or counterfeit a certificate or knowingly make or cause to be made any false statement in any certificate issued under this act or any previous act or in any copy thereof, or shall make use of such forged or false certificate or copy thereof, or shall make use of any false declaration, representation or statement in any such certificate or copy thereof or any document containing the same, he shall be deemed guilty of a misdemeanor and upon conviction thereof shall be fined two hundred dollars or imprisoned for a term not exceeding one year, or both, at the discretion of the court trying the case.

Section 10. In case of the loss or destruction of a certificate the Chief of the Department of Mines shall issue a copy thereof to the person losing said certificate on payment of the sum of one dollar: Provided it shall be shown to the satisfaction of the Chief of the Department of Mines that the loss or destruction has actually occurred.

Section 11. No mine shall be operated for a longer period than thirty days without the supervision of a mine foreman. In case any mine has worked a longer period than thirty days without a certified mine foreman, the owner, operator or superintendent thereof shall be subject to a penalty of twenty-five dollars per day for each day from the said thirty days during which the mine is operated.

Section 12. All laws or parts of laws inconsistent or in conflict with the provisions of this act are hereby repealed.

MINERS' EXAMINING BOARDS

By the Act of 1897 examining boards were established in the various anthracite inspection districts for the purpose of examining persons seeking employment as miners in the anthracite region. Under this Act the board in each district (or its sub-divisions) is required to hold an examination at least once each month, and at the end of each year make reports to the Court of Common Pleas and to the Bureau of Mines and Mining (now Department of Mines) of all moneys received and dispersed in connection with the examinations, together with the number of miners examined and registered and the number who failed to pass.

The Act of 1903, establishing the Department of Mines, provides further that the Miners' Examining Boards shall send to the Chief of the Department of Mines duplicates of the manuscripts and all other papers of applicants, together with tally sheets and the solution of each question as given by the examining board, which shall be filed in the Department as public documents. The only boards that have complied even in part, for the year 1908, with the provisions of the law have been the boards from the First and Second Inspection Districts in Lackawanna county. A copy of the report of the board from the First District, for the year ending December 31, 1908, is printed herewith for the information of those persons who may be interested in the matter.

Annual Report of Miners' Examining Board of the First Anthracite
Inspection District, for 1908

To Hon. James E. Roderick, Chief of Department of Mines.

Sir: We submit herewith the annual reports of the three sub-boards of examiners, as follows:

Report of Sub-Board No. 1

New certificates, 64 at \$1.00 each,	\$64 00
Registrations, 42 at 25 cents each,	10 50
Duplicates, 66 at 25 cents each,	16 50
	<hr/>
	\$91 00
Attending 12 meetings, three members at \$3.00 per day, ...	\$108 00
Attending 4 quarterly meetings at \$3.00 each member,	36 00
Car fare, stationery, etc.,	11 65
	<hr/>
Amount due board,	\$155 65
Received,	91 00
	<hr/>
Balance due board,	\$64 65

Members of Sub-Board, No. 1,

Signed,

Edward T. Saunders, Scranton,
Robert L. Reed, Dickson City,
Charles Jenkins, Dickson City.

Report of Sub-Board, No. 2

New certificates, 138 at \$1.00 each,	\$138 00
Registrations, 59 at 25 cents each,	14 75
Duplicates, 32 at 25 cents each,	8 00
	<hr/>
	\$160 75

Expenses:

Attending 12 meetings, three members at \$3.00 per day, ...	\$108 00
Attending 4 quarterly meetings, at \$3.00 per day,	36 00
Car fare,	14 00
Printing certificates, books and stationery,	15 00
	<hr/>

Amount due board,	\$173 60
Received,	160 75
	<hr/>

Balance due board	<u>\$12 85</u>
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Members of Sub-Board, No. 2,

Signed,

Samuel B. Hadden, Dunmore,
P. J. Hoban, Olyphant,
E. J. Ruane, Archibald.

Report of Sub-Board, No. 3

New certificates, 130 at \$1.00 each,	\$130 00
Duplicates, 65 at 25 cents each,	16 25
Registrations, 42 at 25 cents each,	10 50
	<hr/>
	\$156 75

Expenses:

Attending 12 meetings, three members at \$3.00 per day, ...	\$108 00
Attending 4 quarterly meetings, at \$3.00 per day,	36 00
Car fare, stationery, etc.,	17 00
Hall rent,	20 00
	<hr/>

Amount due board,	\$181 00
Received,	156 75
	<hr/>

Balance due board,	<u>\$24 25</u>
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Members of Sub-Board, No. 3,

Signed,

Joseph Sobey, Jermyn,
John Gafney, Carbondale,
Thomas Farrell, Carbondale.

SAFETY LAMPS

The question of safety lamps is one of great importance and at present a great deal of attention is being given to different kinds of lamps. They are designated variously as "ordinary safety lamps," "improved safety lamps" and "approved safety lamps." However, it is sufficient to say that whatever may be the term used to describe the safety lamp, the lamp for use in gaseous mines should be so con-

structed that when properly adjusted and used with proper care it will not ignite explosive gas or coal dust. Such a lamp affords great protection to the miner and averts in a large measure the danger from explosions. In the hands of an inexperienced or careless workman there is, of course, danger of the glass in the lamp being broken, either by rough usage or owing to the glass being made too tight at the lamp station. When the glass is made too tight, it may break after the lamp has been lighted a sufficient length of time to cause expansion of the glass. It is, therefore, of the greatest importance that all safety lamps should be carefully adjusted and examined before they are turned over to the men and taken into the mines.

The safety lamp should be so constructed that when in proper condition it can be used in any atmosphere, even though it be of an explosive character. The construction should be simple so that it can be easily taken apart and cleaned. It should give a good light, and the glass should be of good quality and perfectly clear. A lock should be on the lamp and should be so constructed as to show when it has been tampered with. It should be an easy matter to detect small quantities of fire damp by the aid of the lamp flame. The size of the lamp should be such as to admit of its being placed as near the roof as possible to detect the presence of explosive gas which, owing to its lightness, is found near the roof.

A NATIONAL BUREAU OF MINES

The explosions of gas and dust that occurred at the Naomi, Monongah and Darr mines in December, 1907, greatly increased the feeling of apprehension that is always present in the minds of the people regarding the dangers of mining. These calamities seemed to indicate that there were hidden dangers connected with the occupation of which the operators, managers, superintendents, inspectors and other persons, who should be informed regarding the matter, were ignorant. As a result of this exaggerated state of fear many appeals were made to Congress to intercede in behalf of the miners of the United States. In response to these appeals several bills were introduced providing for more careful supervision of the mining operations of the country. Speaking in support of these measures, some of the Members charged the operators, managers, superintendents and foremen with negligence, and stated that the Departments of Mines in the different states did not comprehend the dangers that existed, or, if they did comprehend them, were negligent in their duties.

A bill was also introduced in Congress to create a National Bureau of Mines, but it was not enacted into a law because of its failure to pass the Senate. A National Bureau of Mines would probably have little practical utility in so far as the protection of life in the mines of Pennsylvania is concerned, for the reason that the persons in charge of the Bureau would have no authority to compel obedience to their instructions or suggestions. More than this, the persons in charge of the Bureau would unquestionably know less about the real condition of the mines than do the managers, superintendents, foremen and inspectors. They might, however, render great service to the industry, as is now being done at the testing station in

Pittsburg, by applying their technical knowledge to the economical question of coal waste and demonstrating how the low grade coal could be manufactured into coke or used in creating power in other ways. There is a great deal of waste by present methods of mining, for instance, in the Pittsburg seam, where a part of the bottom and a part of the top coal is left unmined because it cannot be used in the manufacture of coke under the present systems in vogue.

The experts might also point out a way by which the amount of coal produced could be doubled by some system that would mine the top seam first and then continue the work systematically until the bottom seam is reached. It is quite difficult, however, to understand how any department of either the National or State Government could be empowered to compel the owner or operator to mine coal in any particular way. The demands of the present are that the best coal available be sent to market, and the consumers will accept no other. If, however, the time shall ever come when the state shall own the coal lands, a systematic method of mining might then be adopted that would have all the economical advantages already suggested; but this question of economical mining, important as it is, has no bearing whatever on the safety of the employes in the mines. These two phases of the question should not be confused by the lawmakers in Washington, but unfortunately not more than one out of twenty of them know anything about the real conditions existing in the coal mines of this state or of other states.

TESTING STATION

The United States Government has recently equipped the most complete testing station in the world at Pittsburg, where tests are made of coal dust, of safety lamps in the presence of different mixtures of gas and dust, and of explosives. The explosives are then labeled, as in European countries, to show the ingredients of which they are made. No doubt this station will add greatly to the technical knowledge of the practical mining men in charge of the mines and also add to the knowledge of the employes who are intelligent enough to understand the tests as explained in the press and by the superintendent in charge of the station.

The State of Pennsylvania should have long ago erected a station of this kind. Had this been done, the managers, operators and miners would have had demonstrated to them in a practical manner the efficiency of safety explosives, and the tests made of dust and gas would no doubt have convinced them of the danger to be apprehended from these destructive agencies.

It has been asserted that the employes will not use safety explosives as provided by the companies, but this is not true, except perhaps, in isolated cases. It should be the duty of the company to provide the safety explosives for use in dangerous mines and it should be made a misdemeanor for any employe to use any other explosive unless it is listed as a permissible explosive at the testing station. This testing station will be the means of saving the lives of many of the employes from explosions of gas and dust. The proposed bituminous mine law will be more specific on the matter of watering the

mines and removing the dust, and will make compulsory the intelligent use of safety explosives. This will do a great deal toward reducing the accidents by explosions of gas and dust.

A test at Arsenal Park station showed that a coal dust explosion occurred with only 8 per centum of coal dust in the air in the absence of gas. With 8 per centum of pulverized coal dust and 92 per centum of air in the absence of fire damp, two explosions were caused, one by a blast of dynamite and the other by a blast of black powder. In view of this statement there is hardly a bituminous mine in the State that is safe where black powder or dynamite is used in bringing down the coal, when a blown-out shot occurs, as all the mines have at least 8 per centum of dust in the atmosphere.

REPORT AND RECOMMENDATIONS OF FOREIGN EXPERTS

The explosions of gas and dust that occurred in this country in December, 1907, created so much alarm in the minds of many of the operators, managers and superintendents, regarding mining conditions, that Congress was induced to make an appropriation to defray the expense of three capable and experienced mining experts of Europe, who were invited here to make investigations and recommendations as to how to mine coal with economy and safety. The men were Messrs. Watteyne, Meissner and Desborough. They visited a few mines in the bituminous and anthracite regions of this State, most of which mines were worked with open lights, and also a few mines in several other states and territories, and made a report, which is given herewith.

These experts are men of experience and high technical knowledge, but I am of the opinion that the State of Pennsylvania has many men of equal ability who could, under the circumstances, have made recommendations and suggestions that would be of just as great value to the operators of our coal mines. In fact, while the recommendations and suggestions are worthy of consideration, they are not original, the Department of Mines, the inspectors and other persons having, at intervals during the past eight or ten years, made similar ones. The report of this Department and many of the mining journals have also covered the ground pretty thoroughly. They are inserted here, however, for the information of the Legislature and the general public.

REPORT

To the Honorable The Secretary of the Interior:

Sir: In response to your request that we cooperate with the United States Geological Survey in the inauguration of its investigations looking to the prevention of mine explosions, and that we submit for the consideration of those connected with the coal-mining industry in the United States such recommendations as experience in our own countries and observation among American coal mines indicates may be useful in providing for greater safety, we beg to submit the recommendations given below.

Since coming to the United States, we have given careful attention to and approve the investigations in relation to this subject begun by the Geological Survey. We have visited typical mines in the more important coal fields of the United States, and have discussed the mining problems with many coal operators, miners, and state inspectors.

To be effective, investigations for the benefit of mining must be continuous. The opening up of new mines, the deepening of old mines, the meeting with new conditions, the changing of explosives, and the inauguration of new processes and methods will call for continuous investigations, to be followed by continuous educational work.

Our investigations and recommendations relate primarily to questions of safety in mining; but in this connection we have been greatly impressed with another closely associated phase of the industry, viz: the large and permanent loss of coal in mining operations in many portions of the United States. This is a serious, permanent, and national loss. It seems to be a natural outcome of the ease with which coal has been mined in the United States and the enormously rapid growth of the industry.

The active competition among the operators and the constant resulting effort to produce cheaper coal has often naturally led to the mining of only that part of the coal which could be brought to the surface most easily and cheaply, leaving underground, in such condition as to be permanently lost a considerable percentage of the total possible product. Certainly much of this loss can be prevented through the introduction of more efficient mining methods, such as the long-wall system, more or less modified, the flushing method. (See "H," 7.)

In the preparation of these recommendations we have recognized fully the great differences between the mining conditions in Europe and those in America, where the industry has developed so rapidly that thorough organization has not yet been possible; where a large percentage of the men entering the mine are unfamiliar either with mining methods or the English language; and where the price of coal at the mine is less than half that in Europe. Nevertheless, we believe that these recommendations will be found useful in the further development of the American coal-mining industry for safety and efficiency. The cordial reception everywhere accorded us leads us to believe that these recommendations will be received by the operators and miners in the same spirit of good will as that in which they have been prepared. But the success of this movement for greater safety and efficiency will depend upon the hearty and patient cooperation of the operators and the miners, working together for the accomplishment of this purpose.

RECOMMENDATIONS

A. Selecting the Explosives To Be Used

(1) We recommend that the Government of the United States examine the explosives now and hereafter used in mining, with a view to eliminating the more dangerous explosives and to improving and standardizing such explosives as may be considered most suitable for such use, these to be designated by the Government "permissible explosives."

The term "permissible explosives" is suggested for the reason that no explosives are entirely safe, and all of them develop flame when ignited; and we advise therefore against the use in the United States of the terms "safety explosives" or "flameless explosives," as these terms may be misunderstood and this misunderstanding may endanger life.

(2) We recommend that the operators and miners of coal use only such explosives as are included in a list of "permissible explosives," when the same has been published by the Government, in all mines where there is risk of igniting either dust or gas, selecting that one which their own experience indicates can be used to the best advantage under local conditions.

(3) We also recommend that investigations be conducted to determine the amount of charge of such "permissible explosives" which may be used to the best advantage under different conditions with a view to reducing danger to the

B. Carrying the Explosives into the Mines

(1) All explosives should be made into cartridges and placed in closed receptacles before being carried into the mine, and the quantity carried into the mine during one day by any miner should be limited as nearly as practicable to the quantity needed by him for use during that day. Handling loose explosives and making them into cartridges by an open light in the mine should be prevented.

(2) Detonators or caps should be handled with great care, and should be carried only by a limited number of responsible persons.

C. Use of Explosives in the Mine

(1) Shooting in or off the solid should not be practiced.

(2) The depth of the shot hole should be less by at least 6 inches than the depth of the cutting or mining. The use of very deep shot holes should be avoided as unnecessarily dangerous.

(3) The overcharging of shots (the use of a larger charge than is required to do the work satisfactorily) should also be avoided as unnecessary and dangerous. The proper standardization of explosives used in coal mining will greatly facilitate the carrying out of this recommendation. (See also "A," 1.)

(4) Shots should never be tamped with fine coal or material containing coal. Clay or other suitable material should be supplied and used for this purpose.

(5) The firing of two or more shots in one working place, except simultaneously by electricity, should not be allowed until a sufficient interval has elapsed between the firings to permit an examination of the working place, in order to see whether any cause of danger has arisen.

(6) Before a shot is fired the fine coal should be removed from the working place, as far as practicable, and the coal dust on the floor, sides, and roof, for a distance of at least 20 yards from the place where the shot is to be fired, should be thoroughly wet, unless it has been demonstrated that the dust in the mine is not inflammable. (See also "E," 1.)

(7) If gas is known to occur in the mine, no shot should be fired until, in addition to the watering, an examination made immediately

preceding the time for firing, by a competent person, using a lamp which will easily detect 2 per cent. of gas, has shown the absence of that amount of gas from all spaces within 20 yards of the point where the shot is to be fired.

(8) Believing that such will be one of the greatest advances which can be made in safeguarding the lives of the miners, we recommend the adoption of a system of electric shot firing, in all mines where practicable, by which all shots in the mine, or in each ventilation district of the mine, may be fired simultaneously, at a time when all miners and other employes are out of the mine.

D. Keeping the Mine Roadways Clean

(1) The roadways of the mines should be kept as free as possible from loose coal which may be ground into dust and of rubbish in which such dust may accumulate, in order to facilitate the removal and wetting of the dust.

E. Wetting the Coal Dust

(1) In all coal mines where explosives are used it is desirable, and in all mines containing gas it is highly important, that the dust on the walls, timbers, and floors of the working places and roadways should be kept continually wet prior to and during the work in the mine. If, however, conditions of roof or lack of water render this general watering impracticable, at least the dust within 20 yards of each shot should be wet before each firing, and other precautions against explosions should be practiced with unusual care.

It is our opinion that a system of watering which occasionally sprinkles the floor only and leaves dry the dust on the walls and timbers of the roadways is useless and is also dangerous in that it may generate an unwarranted feeling of security against an explosion.

F. Special Precautions for Mines Containing Gas

(1) In any mine where as much as 2 per cent. of gas can be detected by suitable method only locked safety lamps of an approved type should be used so long as such condition exists or is likely to recur.

All safety lamps should be maintained in good condition, cleaned, filled, kept in a special room at the surface and carefully examined both when delivered to the miner and when returned by him at the close of each day's work. A defective safety lamp is especially dangerous because of the false feeling of security it engenders.

In the filling of lamps with benzine or other low-flash oils, which should always be done at the surface, special precautions against fire or explosions should be taken.

G. Use of Electricity

(1) Electricity in mining operations offers so many advantages, and has been so generally adopted, that no reasonable objection can be made to its use under proper restrictions. The electrical equipment, however, should be installed, maintained, and operated with great care, and so safeguarded as to minimize danger from fire or shock. The fact that the effectiveness of some insulating materials is soon destroyed in most mines should not be lost sight of.

We recommend the following precautions: For distribution underground the voltage should not exceed 650 direct current or 500 alternating current, these voltages being intended for transmission to machinery operating at 500 volts direct current and 440 volts alternating current respectively. Even lower voltages are preferable. The trolley wires should be installed in such manner as to render shocks least likely; that is, placed either high enough to be beyond easy reach or at one side of the track and properly protected.

Where current at a potential of more than 650 volts is employed for transmission underground, it should be transmitted by means of a completely insulated cable; and where a lead or armored covering is used, such covering should be grounded.

In all mines having electric installation special precautions should be taken against the setting on fire of coal or timber. Inclosed fuses or cutouts are recommended, and each branch heading should be so arranged that the current may be cut off when necessary.

No live electric wire should be permitted in that part of any mine in which gas is found to the amount of 2 per cent.

In all mines producing gas in dangerous quantities, as indicated by a safety lamp which will detect 2 per cent. of gas, the working places should be examined for gas by a qualified man, using such a lamp, immediately before any electric machine is taken or operated there.

II. Precautions against Miscellaneous Accidents

(1) In all new construction, shaft lining and superstructures about the entrance of the shaft (or slopes or drifts) should be built as far as practicable of noncombustible materials.

About the entrances to mines every possible precaution should be taken to prevent fires or the injury of the equipment for ventilation and haulage. Ventilating fans should be placed at one side of the mine opening, and hinged doors or light timbering should render easy the escape of the explosive force in direct line of the shaft or slope.

Proper precautions should be taken for immediately preventing the entrance into the mine of heat and gases and for facilitating the escape of the men in case of surface or shaft fires.

(2) The surface equipment for hauling the coal should be so arranged as to prevent coal dust from entering the mine shaft.

(3) In all new mines, and in all old mines as far as practicable, suitable man roads should be provided for the men separate from the main haulage roads.

(4) In connection with the system of ventilation it is recommended that in the more frequented roads connecting the intake with the return air courses, two doors be provided, these doors to be placed at such a distance apart that while one is open the other is closed.

(5) In view of the large number of accidents from falls of coal or roof, under the existing practice with single props, more attention should be given to the introduction in mines where the roof is bad of better systems of timbering, such as have been long in use with economy and safety in many well managed mines.

(6) In undercutting coal by hand, the premature fall of the coal should be prevented by sprags or other suitable supports.

(7) We believe that the difficulties and dangers encountered in the working of coal seams which are thick and steeply pitching, or of which the coal is highly inflammable in character or subject to firing

form spontaneous combustion, and in mines where the subsidence of the surface must be avoided, may be successfully and economically overcome in many cases through the adoption of the flushing system of mining—that is, the filling with sand or other similar materials of the space from which the coal is removed. This system originated in the United States and is now successfully practiced in portions of Germany, Austria, Belgium and France.

I. Mine Supervision and Inspection

(1) We can not too strongly emphasize the fact that thorough discipline about the mine is absolutely essential to safety, and that thorough discipline can be brought about only through the hearty co-operation of the operators, the miners, and the State.

(2) We are of the opinion that the responsibility for safety in the mine should primarily rest with some person, such as the manager or superintendent, clothed with full authority; and that such person can greatly facilitate the attainment of safety through the employment of a sufficient number of foremen, and also of one or more inspectors whose special duty it shall be to see that the regulations are strictly enforced.

(3) The State can not exercise too much care concerning the experience, technical training and selection of its inspectors. Their positions should be made independent of all considerations other than that of efficiency; and their continuance in the service should be coexistent with good behavior and proper discharge of official duty.

J. Training for Mine Foremen, Inspectors, etc.

We are of the opinion that the cause of both safety and efficiency in coal mining in the United States would be greatly aided through the establishment and maintenance in the different coal regions of special schools for the training of fire bosses, mine foremen, superintendents, and inspectors. The instruction in such schools should be practical rather than theoretical.

The work of these schools would supplement most effectively that of the colleges already established in many parts of the country for the more thorough training of mining engineers.

Respectfully submitted,

VICTOR WATTEYNE,
CARL MEISSNER,

ARTHUR DESBOROUGH.

CHRONOLOGY OF ANTHRACITE COAL INDUSTRY

As a matter of historical interest we print herewith a chronology of the anthracite coal industry, compiled by Mr. William Griffith, Geologist and Mining Engineer, of Scranton, Pa.

This chronology of the Anthracite coal trade, contains more facts connected with the discovery of coal and the development of the Anthracite trade than have ever before appeared, so far as is known, in a single history of facts of the great industry which has been the powerful factor in the development of Northeastern Pennsylvania.

Chronologies have appeared without number, but in practically all of them there has been before a partial marshalling of facts. But this chronology by Mr. Griffith compiled with the enthusiasm of one devoted to the study of a subject practically all the years of his life is more comprehensive. The chronology is here published for the first time.

Mr. Griffith begins with the knowledge the Indians had three-quarters of a century before the Revolutionary war of the existence of coal beds in these valleys and he presents the chief facts he has gathered down to this day, ending with the statement of the number of tons of coal produced in the Lackawanna and Wyoming valleys for a century and the total from the State in the last hundred years. These figures show the shipments from the State to be more than one and three-quarter billion tons while from these two valleys over nine hundred million tons of Anthracite have been produced. These figures alone suggest an enchanting story of wealth.

This chronology made public at this time is all the more interesting since it comes at the time of the celebration of the hundredth anniversary of the discovery by Judge Jesse Fell that Anthracite coal could be burned in an ordinary grate. This was the real beginning of the Anthracite Industry or Coal Trade.

The chronology which tells the wonderfully interesting story of Anthracite coal, is as follows:

1710—Existence of coal beds known by Indians.

1754—July 11, Lackawanna and Wyoming Valley coal regions included in the sale of property by Five Nations to the Susquehanna Connecticut Co. The purchase price of the entire tract was but £2,000, about \$10,000.

1762—First Connecticut settlers, after camping at mouth of Mill Creek, above Wilkes-Barre, for several days, and cutting hay on Jacob's Plains, returned to Connecticut and reported discovery of anthracite coal.

1763—"At a meeting of the Susquehanna company held at Windham, in Connecticut, April 17, 1763, it appearing to this company that some of the proprietors of our purchase of lands at Susquehanna river, to the number of two or three hundred, desire that the lands be laid out into several townships as a part of their rights for the speedy settlement of said lands,

FIRST RESERVATION OF COAL

It is therefore voted that there shall be eight townships laid out on said river as near as may be to the townships granted as gratuity to the first settlers, each of said townships to contain five square miles of land, fit for good improvement, or equivalent thereunto as the land may suitably accommodate, at the discretion of a committee hereafter to be named and appointed for that purpose, reserving for the use of the company for their after-disposal, all beds of iron ore and coal that may be within the towns ordered for settlement.

This would appear to be the first discovery and mention of anthracite coal in the country.—Dr. Egie's History of Pennsylvania.

It is also undoubtedly the first instance of a coal reserve deed, which are so familiar in this region today.

1766—Indians from this locality visiting the Governor of Pennsylvania, complained of robbing of mine by whites, believed to have been a coal mine. In letter from James Trenchman of Philadelphia to the Proprietaries, Thomas and Richard Penn, Spring Garden, London, it is stated that a Col. Francis had found a very great fund of coal at Wyoming in the hills which surround a very fine and extensive belief. "This coal," says the letter, "is thought to be very fine. With his compliments Col. Francis sends you a piece. This bed of coal, situate as it is on this side of the river, may at some time or other be a thing of great value."

1768—Charles Stewart surveyed Sunbury, across river from Wilkes-Barre, and on maps indicated presence of "stone coal" at Ross Hill, now Edwardsville.

FIRST BURNED IN FORGE

1769—Obadiah Gore first burned anthracite in his smith forge at Wilkes-Barre.

1775—Coal mined on banks of Susquehanna near Pittston.

1776—Two Durham boats from down the river came to Wyoming for coal. It was purchased from R. Geer, who had a mine opening above the mouth of Mill Creek. This coal was later used in the manufacture of arms at Carlisle, Pa.

1779—Major George Grant, of Sullivan's army, writing from Wyoming, says, "The land here is excellent and contains vast mines of coal, lead and copper."

1783—John Schopf, in "Travels," mentions a visit he made in this year to a bed of brilliant black coal, a mile above Wyoming, which on handling leaves no taint and burns without emitting an offensive odor.

1788—Nails made with anthracite by Judge Jesse Fell, of Wilkes-Barre, Pa.

1790—Coal known to be plentiful in Schuylkill county, but not used.

1791—Coal was accidentally discovered by Philip Ginter, a hunter, in the neighborhood of Manch Chunk. Specimens were carried to Philadelphia in saddle bags by Col. Jacob Weiss, who purchased the land upon which the discovery was made.

1792—Col. Weiss and others formed the Lehigh Coal Mine Co., the first of the kind in the United States.

- 1795—Blacksmith named Whetstone used anthracite in Schuylkill.
 1799—Coal discovered at Carbondale.
 1800—Coal shipped to Philadelphia from Pottsville.
 1803—Lehigh Coal Mine Co., succeeded in getting two ark loads, about thirty tons, to market at Philadelphia, but no purchasers could be found. City authorities as an experiment attempted to burn it beneath the boilers at the water works, but it only served to put the fire out and the remainder was broken up and distributed over the sidewalks of the vicinity in place of gravel.
 1803—Anthracite coal first burned in a grate in Philadelphia. Although this experiment was successful it excited no public interest and no results followed beyond the simple record of the fact.
 1806—Another boat load sent to Philadelphia from Lehigh region and rejected.
 1807—Abijah Smith & Co., began mining at Plymouth, in Wyoming Valley, shipped 55 tons.

JESSE FELL'S EXPERIMENT

1808—On February 11, Judge Jesse Fell made an experiment in the bar room of his hotel at the corner of Washington and Northampton streets and on the fly leaves of a book entitled "The Free Mason's Monitor," he made the following memorandum:

"February 11th, of Masonry 5808. Made the experiment of burning the common stone-coal of the valley in a grate, in a common fire-place in my house, and find it will answer the purpose of fuel, making a clearer and better fire, at less expense, than burning wood in the common way. February 11th, 1808.

Jesse Fell."

This experiment excited great interest and people came from far and near to watch further experiments which were made in a grate of iron and soon there were dozens of similar grates being constructed and put into use. It is the one hundredth anniversary of this event which was celebrated February 8, 1908, at Wilkes-Barre, Pa.

BEGINNING AND EARLY DEVELOPMENT OF COAL TRADE

The coal trade for export really commenced in 1808 and those who first started in the business and continued in it were John and Abijah Smith, of Plymouth. These young men left their home in Derby, Conn., in 1805-06, and immediately purchased coal land and engaged in mining coal. They shipped the first ark of coal to Columbia, Pa., in 1807. The following year they sent several arklloads to Columbia and with them sent masons who constructed fireplaces for the purchasers of coal, in which the coal might be burned. At this time coal sold for about \$10 per ton.

1812—Col. George Shoemaker discovered coal on Schuylkill and carted nine wagon loads to Philadelphia. He sold two loads and was later denounced as an imposter by the purchasers and was compelled to give the rest away.

1812—Abijah Smith & Co., of Plymouth, Pa., making shipments to Baltimore and New York city in coasting vessels from Havre de Grace, Md., the coal being successfully used there.

1812—The first anthracite coal firm in New York city was Price and Waterbury, who handled this coal for Abijah Smith & Co., selling at \$25.00 per chaldron of 3,000 pounds.

1813—George M. Hollenback shipped two arklloads of coal from Mill Creek mine. Joseph Wright, of Plymouth, mined two arklloads of coal from mines of brother Samuel G. Wright, of New Jersey, at a point near Port Griffith. Charles Miner and Jacob Cist about this time started to write news articles for the Philadelphia, Baltimore and New York papers and thus aroused interest in the product. They leased a mine near Mauch Chunk in 1813 and in 1814 took an arklload of coal down the river to Philadelphia and disposed of it after much difficulty.

1814—Minor, Cist & Robinson made their first shipment to Philadelphia from near Mauch Chunk. Two boat loads arrived at Philadelphia and were largely purchased by White & Hazard for \$21.00 per ton and used in the first successful effort to utilize anthracite in the iron industry at their wire mills at Falls of Schuylkill.

1815—Being firmly convinced of the value of the coal, White, Hazard & Hanto set about securing a lease on Lehigh Coal Mine Company land near Mauch Chunk, for 10,000 acres for 20 years, for "one ear of corn per year, if demanded," etc., and succeeded.

1814-15—Coal mined at Carbondale and shipped via Lackawaxen and Delaware Canal to Philadelphia.

1815—Schuylkill Navigation Co. organized.

1817—Coal trade well established and coal the chief article of export and the local fuel of Wyoming Valley. Several mines in operation, shipping 2,000 tons per year down Susquehanna river.

1818—White & Hazard secured passage by Pennsylvania Legislature of "An act to improve the navigation of the Lehigh river." Lehigh Navigation Company and Lehigh Coal Company organized and merged into the Lehigh Coal and Navigation Company.

LEHIGH COAL TRADE BEGINS

1820—About 12,000 tons shipped to date and 2,500 tons shipped per year from Wyoming Valley, Lehigh Coal and Navigation Company began mining and shipping; price, Philadelphia, \$8.40 per ton. Shipment this year 365 tons.

1821—Half dozen mines operating in Wyoming Valley and shipping via Susquehanna river. Coal at mines valued at 50 cents a ton, cost 50 cents a ton to mine, and 50 cents a ton to haul to river. Price at Harrisburg, Columbia and other river points, \$4.00 to \$4.50 per ton.

1823-1825—Delaware and Hudson Canal Company organized.

1825—Schuylkill canal was completed from Mt. Carbon to Philadelphia.

1826—Coal discovered near Hazleton.

FIRST RAILROAD BUILT

1828—First railroad built by Delaware and Hudson Canal Company.

1829—Baltimore Coal Company organized to mine coal at Wilkes-Barre. Delaware and Hudson Canal Company began shipping from Carbondale.

1829—Lehigh Canal opened Mauch Chunk to Easton.

1830—Stephen Girard purchased from trustees of the late Bank of United States 28,200 acres of land in Pennsylvania at \$1 per acre, which included the present coal lands of the Girard Estate.

1831—North Branch Canal completed to Nanticoke.

1831—Nesquehoning Railroad and plane built.

1831—Morris Canal opened Phillipsburg to Newark; opened to Jersey City, 1836; leased by Lehigh Valley Railroad Company, 1872.

1832—Little Schuylkill Railroad began transporting coal from Tamaqua region.

1832—Shamokin division Northern Central Railroad originally opened. Reorganized 1851. Leased to Northern Central Railroad 1863.

1833—Delaware division Pennsylvania Canal opened.

1834—Wyoming and State Canals opened.

1837—Lehigh navigation to White Haven opened.

1837—Shipments of coal began from Beaver Meadow region.

1837—Shipments of coal began from Pine Grove via Union Canal.

1837—Morris and Essex Railroad opened. Leased to Delaware, Lackawanna and Western Railroad, 1869.

1838—Col. James W. Johnson, of Pittston, Pa., secured charter from State for Pennsylvania Coal Company.

1838—Shipments of coal began from Hazleton region.

1838—Washington Coal Company organized.

1839—Summit Branch Railroad opened. Leased to S. B. R. R. Company, 1866.

1838—Shipment of coal began from Shamokin region westward.

1839—Shipments of coal began from Lykens Valley region westward.

1840—Shipments of coal began from Buck Mountain region.

1840—Quakake Railroad opened. Extended and opened to Mt. Carmel, 1862.

1841—Philadelphia and Reading Railroad transported 850 tons of coal.

1842—Philadelphia and Reading Railroad began transporting coal through to Port Richmond.

RAIL SHIPMENTS FROM WILKES-BARRE

1846—Rail shipments of coal began from Wilkes-Barre via L. and S. R. R. planes and Lehigh Canal.

1847-48—Wm. R. Griffith, for the Wyoming Coal Association purchased large areas of coal land about Pittston at \$100.00 per acre and transferred same to Pennsylvania Coal Company.

1849—Washington Coal Company merged into Pennsylvania Coal Company. William R. Griffith, President.

1850—Pennsylvania Coal Company began business and building of Gravity Railroad to Hawley.

1850—Total shipments from all regions for year 3,358,899 tons.

1851—Delaware, Lackawanna and Western Railroad built from Scranton to Great Bend.

1852—Central Railroad of New Jersey opened from Elizabeth to Easton. Third rail from Hampton Junction laid 1856.

1852—Delaware, Lackawanna and Western Railroad began breaking coal into sizes for market, followed by Delaware and Hudson Company.

1854—Lehigh Valley Railroad building.

1855—Lehigh Valley Railroad Company began transporting coal to Phillipsburg. Opened to Perth Amboy in 1875.

1856—Treverton Railroad opened.

1856—Delaware, Lackawanna and Western Railroad completed to Delaware Water Gap.

1857—Belvidere Delaware Railroad began transporting coal.

1857—North Pennsylvania Railroad opened. Leased to Philadelphia and Reading Railroad Company, May 1, 1879.

- 1858—Lackawanna and Bloomsburg Railroad opened; leased to Delaware, Lackawanna and Western Railroad Company, 1873.
- 1858—Mining began in McAuley mountain region.
- 1860—Total shipments this year, exclusive of local consumption, 8,513,123 tons.
- 1864—Stove coal sold at auction in July for \$12.03 per ton.
- 1866—Lehigh and Susquehanna Railroad opened to Scranton.
- 1867—Lehigh Valley Railroad opened to Pittston Junction.
- 1867—Pea coal first appears, returned separately on the railroad toll reports of the Girard Estate collieries in April, this year.
- 1868—Lehigh and Susquehanna Railroad opened to Phillipsburg. Leased to Central Railroad of New Jersey, 1871.
- 1868—Pennsylvania Railroad began carrying coal.
- 1869—Pennsylvania and New York Railroad (Lehigh Valley) opened to Waverly. Strike at mines January to May.
- 1869—Wilkes-Barre Coal and Iron Company began business.
- 1869—Pea coal first recognized in Girard Estates leases, and described as coal which would pass through five-eighths of an inch screen mesh.
- 1870—Nesquehoning Valley Railroad and Panther Creek tunnel opened.
- 1870—Sunbury, Hazleton and Wilkes-Barre Railroad opened. Leased by Pennsylvania Railroad, 1878.
- 1870—Total annual shipments 16,182,191 tons.
- 1871—Erie Railroad Company began mining and shipping coal.
- 1872—Lehigh Valley Railroad leased the Morris Canal.
- 1873—Philadelphia and Reading Coal and Iron Company began mining and shipping coal.
- 1873—Miners' strike January to July.
- 1874—Wilkes-Barre Coal and Iron Company merged into Lehigh and Wilkes-Barre Coal Company.
- 1875—During recent years vast areas of coal lands purchased for Philadelphia and Reading Coal and Iron Company.
- 1876—During past few years the large companies secured control of trade by purchasing collieries, etc. In February Anthracite Board of Control formed to regulate trade.
- 1877—Railroad strike and riots two months.
- 1878—Sunbury, Hazleton and Wilkes-Barre leased by Pennsylvania Railroad.
- 1878—Buckwheat coal first appears, returned separately on the railroad toll reports of the Girard Estate collieries, in August, this year.
- 1879—Philadelphia and Reading R. R. Co. leased Delaware and Bound Brook R. R., May 1.
- 1879—Stove coal sold at auction in September for \$2.36 per ton at tidewater.
- 1879—Lehigh and Wilkes-Barre and Lehigh Coal and Navigation Company controlled by C. R. R. of N. J.
- 1880—Annual shipments 23,437,242 tons.
- 1881—North and West Branch R. R. opened November 23.
- 1883—First Reading-Jersey Central lease.
- 1884—Erie and Wyoming Valley R. R. built by Pennsylvania Coal Co. and North and West Branch Pennsylvania Railroad extended to Wilkes-Barre.
- 1885—Pennsylvania Coal Company's gravity road to Hawley abandoned.
- 1886—Jersey Central arranged to resume independence on January 1, 1887.
- 1887—Important development of lake and western trade.
- 1887—Miners' strike January to May.
- 1888—A banner year, high prices and large tonnage. Fred A. Potts died.
- 1889—Poughkeepsie bridge route opened. F. B. Gowen died.
- 1890—New York, Ontario and Western line to Scranton opened.
- 1890—Annual shipments, 35,855,173 tons.
- 1891—Coxe Bros. road (D. S. & S.) began operations.
- 1892—Reading deal organized by A. A. McLeod.
- 1893—Port Reading began business and McLeod combination broken.
- 1893—Report of Penna. Coal Waste Commission published.
- 1894—New York, Susquehanna and Western line to Wilkes-Barre opened.
- 1895—Last formal meeting of the "Sales Agents" held.
- 1895—Rice coal first shipped from collieries of Girard Estate.
- 1895-1896—Independent operators feeling aggrieved at arbitrary treatment by transportation companies hold meetings to discuss plans for mutual protection. Results in organization of Anthracite Coal Operators' Association.
- 1896—Shipments of small coal recovered by screening and washing the culm or waste piles began about this time.
- 1896—Last meeting of presidents held January 23, and percentages adopted.
- 1897—E. P. Wilbur resigned presidency of the Lehigh Valley.
- 1898—New York, Susquehanna and Western leased to Erie, D. & H. canal abandoned.
- 1899—Change in Lackawanna: Samuel Sloan, president, succeeded by W. H. Truesdale.
- 1899—Simpson & Watkins sold to Temple Iron Company.
- 1900—Absorption by the Erie of the Pennsylvania Coal Company interests, both coal and railroad. Anthracite Coal Operators' Association ceased to hold monthly meeting in New York as formerly.
- 1900—Annual shipments, 45,500,000 tons. Miners' strike this year.

1901—The feature this year was the establishment of a recognized scale of selling prices.

1902—The long strike from May 12 to October 24. Settled through agency of Coal Strike Commission appointed by President Roosevelt.

1902—Conciliation Board recommended by above commission organized.

1903—Record output; shipments approached 60,000,000 tons.

1904—Control of the N. E., O. & W. Railway goes to N. Y., N. H. & H.

R. R. Co.

1905—Lehigh Valley R. R. buys out Coxé Bros. & Co. Record production, 78,647,020 short tons.

1906—Six weeks' suspension. Change in management of L. C. & N. Co. W. A. Lathrop made president.

1907—Annual shipments about 66,000,000 tons.

1908—The anthracite coal trade began one hundred years ago, based upon proof by Judge Jesse Fell, at Wilkes-Barre, in 1808, that the coal would burn in a grate without artificial draught and thereby established its value as a domestic fuel. Upon this foundation trade was immediately established by shipments from the Wyoming Valley via Susquehanna river. From that time the trade has been regular and continuous, without intermission for a century, as shown in the above chronology.

Total production for the century in the Lackawanna and Wyoming valleys, 901,000,000 tons; total from state, 1,739,000,000.

The estimated reserve coal, subject to future development, is as follows: Lackawanna and Wyoming region, 1,897,000,000 tons; the entire state of Pennsylvania, 6,284,000,000 tons.

FARMING AND MINING

Farming and mining are the basic industries of the country. It is accepted as an indisputable fact that when the farmer has a prosperous season times generally will be good. It is also a fact that when the coal business is prosperous the country is also benefited, particularly in the states that produce the coal. As long as coal is produced in great quantities, it follows as a natural sequence that the mills and factories are kept in operation, and this means prosperity to both employer and employe.

A great deal has been said recently about the tremendous increase in the value of farm products. Taking 100 as the basis for the value of the products in 1899, there has been an increase to 159 in 1907 or more than 50 per centum.

The increase in the value of the mineral products has exceeded even this remarkable increase. In the product of coal, taking 100 as the basis of value in 1899 the increase up to 1907 was 204 or more than 100 per centum.

The following table shows the relative growth of the value of farm and mineral products in the United States since 1899.

Year	Farm	Mineral
1899, -----	100	100
1900, -----		109
1901, -----		113
1902, -----		130
1903, -----	125	147
1904, -----	131	154
1905, -----	134	160
1906, -----	143	188
1907, -----	159	204

With the products of agriculture and mines constantly advancing, business depressions need cause but little apprehension. While depressions have a disquieting effect upon many industries, they can produce no really serious results from a national standpoint while these staple products of the country continue to show material development.

THE MOUNT LOOKOUT EXPLOSION

During the year 1908 several serious accidents occurred in the anthracite coal mines. An explosion of gas at the Mount Lookout colliery caused the loss of 12 lives, runaway cars on the slope at Warrior Run colliery caused the loss of 6 lives, and an explosion of powder at the Lykens colliery caused the loss of 6 lives. In accidents in which more than one person was killed at a time 88 lives were lost. I have no hesitancy in saying that very few of the 88 lives were lost through accidents that could not have been prevented had the victims themselves and the persons directly in charge of the mines taken the proper precautions.

Without going into details of these accidents, I desire to go on record as to the probable cause of the disaster at the Mount Lookout colliery that occurred May 12.

The map of the mine would seem to show that a large number of men was employed in the Ross vein when the accident occurred, but the records of the mine inspector show that the average number of men in the mine a week previous to the accident on the day shift was 30 and on the night shift 10, and that ordinarily over 12,000 cubic feet of air per minute was passing to the face of the gangway or rather through the last cross-cut and through the unfinished cross-cut. It is evident that no large quantity of gas could have accumulated at the face of this gangway, yet a small amount would accumulate beyond the unfinished cross-cut, which had not been opened to the full size, and, whenever this quantity of gas filled back and into the cross-cut and to the face of the airway, it would be ignited by coming in contact with the flame from the feeder. This is my solution of the several small explosions.

The subsequent explosion that resulted so disastrously was, in my opinion, due to bad judgment, neglect and carelessness. The first mistake made was the neglect on the part of the management to notify the inspector promptly of the fire that was burning in the face of the airway. If that precaution had been taken, he would have undoubtedly been able to prevent the loss of life that followed. However, it is an every-day occurrence to see these feeders of gas on fire in some of the gaseous mines of the Wyoming Valley, but the Mount Lookout mine was not a dangerous gaseous mine, nor was it so considered, and this being the case the danger to be apprehended from the existing condition was not given sufficient consideration. It is evident from the testimony given at the inquest which was very conflicting in many essentials, that the gas feeder had been extinguished and that the fire in the coal had been put out, or the men George Metcalf and Arthur Smallcomb could not have lived in the return air current, repairing or replacing the check door. The

question that seemed to puzzle the court, the coroner and the jury in this case was, Where did the gas come from that caused the disastrous explosion? This evidence was very conflicting and for the lay mind it was hard to understand. The solution of this question is very clear to me and should have presented itself to the man or men in actual charge of this part of the mine at the time. When the persons in charge were satisfied that the fire at the face of the airway was extinguished, they should have withdrawn all the men from the gangway, and airway before proceeding to restore ventilation in the other parts of the mine. If that had been done the accident could not have occurred. But instead of doing that, the person or persons in charge, in their anxiety to get the place in readiness for work, put men to work to repair or replace the check doors, marked Nos. 1 and 2 on map, on the main gangway (and Smalcomb and Metcalf to repair or replace the check door, marked No. 3 on map on the return airway), so as to force the air into gangway marked Road 6 on map. The men on the main gangway either replaced or repaired the two check doors, marked Nos. 1 and 2 on map, that controlled the ventilation to the seven inside breasts, marked Nos. 1 to 7 on map, on the main gangway, forcing the air to the faces of these breasts which brought the accumulation of gas down on the persons who were carrying water at the faces of gangway and airway, and it was ignited in some way by one of these workmen.

Without going into any lengthy statement of the facts, I may say that Inspector Boyle and myself failed to find any violation of the law in connection with this disaster, but we did find an error in judgment on the part of the men actually in charge. By reason of the argument of the Assistant District Attorney, the Judge was led into error in pronouncing the door, marked No. 3 on map, where Metcalf and Smalcomb were killed, a *main door*. If that had been a main door, there would have been a violation of the law, but even if it had been a main door and there had been no extra door, which would be a violation of the law, still that fact would have nothing to do with the cause of the accident. The District Attorney had no valid reason for attributing this accident to a violation of the law; having doors, check doors, or any other doors, had nothing whatever to do with bringing about this accident.

Following is Judge Fuller's decision in this case.

Luzerne County, ss:

Commonwealth	}	
<i>vs.</i>		
George W. Steele, Superintendent, Gilbert Jones, Assistant Mine Superintendent, Bernard Holleran, Mine Foreman, Joseph Collett and John Ferri, sometimes called John Selano, miners, at the Mount Lookout Colliery of the Temple Iron Company.		In Quarter Sessions, No. 850, September Sessions, 1908.

In Re: Charge of negligent guilt under Article XVII, Penalties Act of June 2nd, 1891, P. L. 176.

DECISION

This case has been brought before us by contemporaneous informations of the County Detective and of the Mine Inspector, charging defendants with sundry offenses against the said Act, accompanied by a dangerous accident involving the death of twelve men and the injury of thirteen other men through an explosion of gas in the South gangway of the Red Ash Vein at the Mount Lookout Colliery of the Temple Iron Company, on May 12th, 1908.

The charge contained in the single information of the Mine Inspector is, that the said accident resulted from certain negligent violations of the act, viz:

(a) By Collett and Ferri, the two miners, in failing to give notice that gas had been ignited in the said gangway about 5. P. M., May 11th, 1908, the day preceding the accident, contrary to Rule 38, Article XIV of the Act;

(b) By Holleran, the Mine Foreman, in failing immediately to examine the locality of ignition when notified thereof on the morning of May 12th following, and in ordering or permitting a large number of men to go into the gangway with exposure to the danger of explosion;

(c) By Steele, Superintendent, and Jones, Assistant Mine Superintendent, when fully cognizant of the situation, in permitting a large number of men thus to go into danger.

The charges contained in three separate informations of the County Detective against Steele, Jones and Holleran, respectively, are:

(1) Against Steele, that as Superintendent, he was negligently guilty of certain offenses against the Act, whereby a dangerous accident might have resulted, viz:

(a) By permitting one Martin Tigne to act as fire-boss although the latter had not made the certificate required by Section 9, Article VIII; (b) By neglecting to have placed extra main doors as required by Section 12, Article X; (c) By neglecting to use every precaution on the day of the accident to insure the safety of the workmen, as required by Rule 8, Article XII; (d) By not withdrawing all the workmen except those required to remove the danger, as provided in said Rule 8, Article XII; (e) By not giving notice without delay to the proper inspector, that a fire had occurred or a dangerous body of gas had been found in the mine as required by Section 2, Article XIV; (f) By not using every precaution to insure the safety of the workmen not only on the day of the accident but prior thereto;

And that by reason thereof a dangerous accident and explosion in the mine did result on May 12th, 1908, causing the death or injury of sundry workmen;

(2) Against Jones, that as Assistant Superintendent he was guilty in like manner and with like results as Steele;

(3) Against Holleran, that as Mine Foreman he was guilty in like manner as Steele and Jones of the offenses enumerated (a), (b), (c), and (d), and that (e) he was then and there negligent, careless and derelict in the performance of his duties as Mine Foreman.

No information was presented by the County Detective against Collett and Ferri, the miners.

All of the persons charged voluntarily appeared and gave bail, waiving the formal issuance of warrants and the case has been heard with great amplitude of evidence as well as of argument.

It now devolves upon us to "determine the guilt or innocence of the persons so charged," and this is an undertaking of the greatest difficulty on account of conspicuous confusion not only in the testimony but in the Act upon which the proceeding is based.

For convenience, we will first make a general consideration of the entire case against all of the defendants, and then specific separate disposition of the case against each.

From the evidence we find, and here state, the following

FACTS

1. The Temple Iron Company, a corporation, is the owner of a certain anthracite mine or colliery known as the "Mount Lookout," situated in the Borough of Exeter, this County.

2. At the time of the occurrences herein narrated, the said George W. Steele was Superintendent, the said Gilbert Jones Assistant Mine Superintendent, the said Bernard Holleran one of the Mine Foremen, and the said Joseph Collett and John Ferri (or Selano) Miners at the said mine or colliery.

3. At the same time one Martin Tigne was employed as night watchman in the part of the mine embracing the scene of the accident hereinafter described, and had also been permitted to act as fire boss in the absence of one James Walters, the regular incumbent of that position. The said Tigne had never made the certificate prescribed by Section 9, Article VIII, as a preliminary for acting in that capacity, but he was a miner of large practical experience, fully qualified to make the certificate so prescribed.

The circumstance that he was permitted to act as fire boss without having made the certificate could not possibly operate, and in fact did not operate, to

cause said accident, directly or indirectly, approximately or remotely, because he had in fact all the experience required to perform the duties of the position.

4. About 5 P. M. on May 11th, 1908, the day preceding the accident there occurred an explosion from an ignition of gas where the two miners, Collett and Ferri, were working at the face of a certain gangway in the Red Ash Vein of the said mine:

It seems likely that the gas was ignited by Collett or Ferri, but the fact is not proved.

They went home soon afterward without notifying the mine foreman or his assistant of the ignition, but Collett informed the footman as he went out, and the fact was known to others in the vicinity.

Furthermore the evidence fails to show that any mine foreman, or assistant, was on hand at the time.

It was made known about 7 P. M. to the said Martin Tigue, then on duty in the capacities above described, and the only person apparently in charge of the vein at that time.

He made an examination, but found no fire nor any other trouble.

No proved act or omission of Collett or Ferri, the miners, at this time, could possibly have been a contributing factor to produce the accident on the following day.

5. Between 12 and 1 o'clock on that same night there occurred another explosion and a fire in the same locality.

At that time Tigue had gone out of the Red Ash Vein into another vein, and from thence to an office on the outside.

It does not distinctly appear what men, if any, were in the Red Ash Vein at this hour, but Tigue was at once notified by the engineer, who received the word from the pump runner.

In company with the latter, Tigue went immediately to the scene of the explosion, where he found a bad fire, which he proceeded to extinguish by exploding dynamite.

He then went on his round of duty into another vein, returning to the Red Ash about 4.30 A. M., when he found again a bad fire in the same locality.

He sent for five or six men who carried water, from a dip or depression in the vein about 85 feet distant, to put upon the fire at the face, until just before 7 A. M. when Tigue exploded more dynamite and, as they all supposed, extinguished the fire.

By this time it would seem that Holleran, the mine foreman, and Jones, the assistant mine superintendent had arrived upon the scene, followed soon afterward by Steele, the superintendent.

At 8 A. M. another explosion occurred at another place about 600 feet distant in the same vein, by which two men were burned.

After that explosion, Holleran ordered the miners out of the mine, and those coming to work were stopped, and in fact from that hour until the fatal accident, which occurred about 4 P. M., no mining of coal was permitted nor were any workmen permitted to be in the Red Ash Vein except those engaged in the work of combating the gaseous and igneous conditions at the face or in the work of restoring ventilation in the mine by repairing certain doors, brattice and barriers, which had been damaged by some one or more of the explosions.

From a confused mass of testimony, given by numerous witnesses whose descriptions differ, it is not easy nor is it perhaps necessary, to state with precision the true sequence or correlation of events during the period of about six hours preceding the fatal explosion.

We feel constrained to compliment counsel concerned in the case for their mastery of the fine points involved, and at the same time to confess our own deficiency in the technical knowledge which might help us to obtain a better grasp of the situation.

Between the hours of 8 and 10 the work of overcoming the gas and restoring the instrumentalities of ventilation, was carried on under the supervision of Steele, Jones and Holleran.

They believed that the cause of the trouble had been removed, but at 10 A. M. there occurred another explosion at the face, by which Holleran was temporarily incapacitated.

Again, about half an hour after, another explosion occurred at the same place.

Strenuous efforts were continued to overcome the difficulty. One Babcock, a man of great skill, knowledge and experience, was apparently placed at this stage in direct charge of what was being done.

A dozen or more men in two relays, one resting while the other worked, carried water from the dip to the face.

Babcock, and perhaps one or two other miners, with safety lamps, made repeated examinations for gas in the locality of disturbance. Other men were engaged in repairing the doors and brattice.

Steele and Jones were in control, in close proximity, although not in the immediate locality of the disturbance. They so remained until about 1 P. M., when they went away, leaving Holleran in charge, after Babcock had reported that the mine was safe.

There was no relaxation, however, in the activity and vigilance of those concerned in the work, and between 1 P. M. and 4 P. M. there were actually engaged as many as thirty men in the work above described.

About 3.45 P. M. occurred the final and fatal explosion at the face of the gangway, by which seven of the men engaged in the work were immediately killed, five others died within a few days as the result of injuries then sustained, and eleven others were injured to a greater or less extent.

Undoubtedly the primary cause of the conditions and difficulties above described and of the final catastrophe, was an emission of gas, denominated in mining parlance a "blower" or "feeder," in the floor, at the face of the gangway.

By the accumulation of this gas and its dilution with air, a condition was created which upon ignition of the mixture would produce an explosion.

Ignition might come either from a naked lamp in the hands of a workman, or from a match struck by him, or from a burning feeder.

A burning feeder might be so minute and colorless as to be practically invisible and thus evade discovery or extinction even by sharpest scrutiny and most diligent effort.

In the very process of ventilation the current of air brought into the explosive body of gas might have the effect of forcing it down upon such a feeder, located near the floor, and thus bring about an explosion.

The evidence in this case does not prove the precise cause of the fatal explosion, but the most likely conjecture to be drawn from the narrative is that there existed all along during the entire period of time, from the first explosion on May 11th until the final explosion on May 12th, a lighted feeder of such character as to escape discovery even with all the scrutiny and efforts put forth in the manner above described.

The able and experienced mining men who were put upon the stand were unable to recount in all their experience a case in which after such scrutiny and such efforts a burning feeder evaded discovery. Nevertheless it was a possible, although not a probable phenomenon.

6. Confronted with the conditions above described, the persons in charge were thrown upon the exercise of their best judgment under all the circumstances to determine what course was best to pursue.

There were, perhaps, three possible courses, viz., (1) to withdraw the men in the mine, shut off the ventilation and thus smother with certainty the lurking, undiscovered flame of feeder, (2) to withdraw all the men except those required to find and overcome the cause of the explosion, or those required first to restore the instrumentalities of ventilation, pursuing only one of these two objects at the same time, (3) to pursue both objects at the same time by keeping engaged a sufficient number of men to fight the source of explosion and restore the means of ventilation simultaneously.

In the judgment of the mine inspector one of the first two courses should have been pursued.

In the judgment of those in charge, the last course was a proper one and was pursued.

The forceful argument of the able Assistant District Attorney, who conducted this case in behalf of the Commonwealth, has engendered in our mind a very serious doubt whether the persons in charge exercised good judgment.

In the light of what happened it would be easy to find as a matter of fact that they erred in their judgment and should have pursued a different course.

We need hardly suggest, however, that to err in judgment is very different in law as well as in morals from being negligently guilty of an offense against the Act.

In this proceeding it is plain that the judgment of the Court cannot be substituted for that of the persons in charge of the situation if they honestly exercised their best judgment and vigilantly pursued the course which really seemed proper under the circumstances.

We think they did this.

The mine inspector has expressed the positive opinion that if the lighted feeder was really extinguished their management of the situation was perfectly proper.

They honestly believed that it was extinguished.

Competent persons, after examination, reported safety.

There was perhaps a lack of sagacity, but we are unable to find that there was negligent guilt beyond the reasonable doubt which in this quasi criminal proceeding assuredly belongs to the accused.

We cannot find as a fact "that every workman except such persons as were required to remove the danger, were withdrawn from the mine," but we do find as a fact that all were withdrawn except those engaged in removing the danger, and such as the persons in charge actually thought to be required for that purpose.

7. Notice of the foregoing occurrences was not given to the inspector of the district until about 5.30 P. M. May 12th, almost two hours after the fatal explosion.

Fire had occurred and a dangerous body of gas had been found in the mine at different times during the afternoon and night of May 11th and the early morning of May 12th, knowledge of which came to the superintendent and assistant superintendent about 7 A. M., May 12th. Notice then should have been given "without delay, to the inspector," as prescribed by Section 2, Article XIV of the Act. In fact notice was delayed until about 5.30 P. M.

If notice had been given within a few hours, say as early as noon on May 12th, it is possible that the inspector would have arrived upon the scene in time to dictate the course of action which he now states would have been proper and thus the final catastrophe might have been averted.

But there we come into the field of conjecture, outside the field of positive proof, and we are unable to find as a fact that failure to give notice was a cause of the accident.

8. In the said mine no extra main doors had been placed or maintained, in the manner prescribed by Section 12, Article X of the Act. They were afterwards placed.

If there had been such extra main doors at the time of the accident, they could have been brought into use to meet the immediate emergency and thus diminish the number of workmen required to restore ventilation while other workmen were simultaneously engaged in combating the possible source of explosion.

Two of the men instantly killed, George Metcalf and Arthur Smallcomb, were actually engaged at the time in the work of repairing a main door less than 300 feet from the face of the gangway, which had been damaged by previous explosions.

It is plain, of course, that if an extra main door had been maintained ready for use in the emergency, the labor of these particular men at that particular time on that particular job, would not have been required and their lives might have been saved.

The failure to have extra doors, however, was not a contributing cause of the explosion.

Without any doors the current of ventilation would have come directly to the face through the gangway instead of circuitously through the lateral workings.

The absence of doors did not cause the explosion, but indirectly and perhaps remotely it did tend to increase the number of men exposed to the effect of the explosion.

Having stated what we conceive to be all the pertinent facts bearing upon the question of guilt or innocence, we will now proceed to state as pertinent to the same question certain general conclusions of

LAW

1. The persons charged must be proved "negligently guilty of an offense against the provisions of the Act."

It is not enough to prove a mere violation of law.

The violation must be negligent.

Of course, the law would impute negligence to a violation which is deliberate, ignorant or unaccompanied with the exercise of honest judgment, but the law does not impute negligence to a violation which is not committed deliberately or ignorantly but only through an error of judgment after an honest and vigilant exercise of the faculty.

The beneficent purpose of this Act should not be frustrated by drawing fine distinctions, but we cannot believe that the Act intended to inflict criminal punishment upon honest errors of judgment.

2. The offense must be one "whereby a dangerous accident has resulted or might have resulted to any person or persons employed in the mine."

Fair construction would extend this language to cover the cases (1) of an offense unaccompanied by any accident connected therewith causally or otherwise, although it might have been the cause of an accident, (2) of an offense accompanied by an accident but not causally connected therewith, although it might have been the cause of some accident; (3) of an offense accompanied by an accident and perhaps causally connected therewith but not certainly proved to be thus connected; (4) of an offense accompanied by an accident and causally connected therewith by proof which establishes the accident as the result of the offense.

The informations must, of course, determine which of these four cases is presented for disposition by the Court.

The information of the mine inspector clearly presents case (4) and contains the specific single charge that the alleged offenses resulted in the accident, and there should be no conviction thereunder without proof of the causal connection.

The informations of the county detective, on the other hand, contain the specific duplex averments that a dangerous accident might have resulted and that a dangerous accident did result from the alleged offenses, thus fairly presenting cases (2) and (3) as well as (4), and sustaining a conviction even without a causal connection between offense and accident.

3. The last conclusion leads to the acquittal of Collett and Ferri, the two miners, who are embraced only in the information of the mine inspector and whose offense, even if proved, had no causal connection whatever with the accident.

4. "An offense against the provisions of the Act" within the purview of this proceeding, embraces only those which are charged in this proceeding as violations of Article X and Article XII, but not those which are charged as violations of Article VIII and Article XIV.

Unintentionally and unaccountably perhaps, but nevertheless unmistakably, the Act itself furnishes this definition of the term.

Thus Article IV, relating to "shafts, slopes, openings and outlets," Article V, relating to "boilers and connections, machinery, etc.," Article VI, relating to "wash houses," Article IX, relating to "employment of boys and females," Article X, relating to "ventilation," Article XI, relating to "props and timbers," Article XII,

relating to "general rules," and Article XIII, relating to "inquests," each contain the specific provision separately and distinctly expressed in each of these articles that any persons violating "this Article shall be guilty of an offense against the Act." Article XII contains a further specific reiteration and application of the definition to Rule 25.

On the other hand Article VII, relating to "ambulances and stretchers," Article VIII, relating to "certified mine foremen," and Article XIV, relating to "returns, notices, etc." contain no such provision, and the requirements of those articles are left without this stamp of express legislative definition.

This omission, indeed, may have been entirely unintentional, one among many other singularities and ambiguities which distinguish the Act, but it is too marked to be disregarded on that explanation.

The Act prescribes upwards of 100 different requirements.

It specifically defines the violation of all but a certain few as an offense against the Act, but does not so define the violation of those few.

It then provides a certain proceeding and tribunal by which to try the guilt or innocence of persons charged with an "offense against the provisions of the Act," an expression equivalent to an "offense against the Act."

The conclusion may seem technical, but surely it is irresistible on the principle of "expressio unius" as well as of strict construction, that the certain few are not meant to be embraced within the proceeding.

This conclusion, of course, excludes from consideration the charge of permitting Tigue to act as fire boss and the charge of failure to notify the mine inspector.

5. By fair construction, the language "dangerous accident to any person or persons employed," embraces not merely the explosion itself, but the effect of the explosion upon persons employed, and therefore even if the explosion itself was not caused by an offense against the Act, nevertheless if a particular person would not have been injured except through the offense of permitting him to be at work, this of itself would constitute the dangerous accident contemplated.

The effect of this conclusion is to hold responsible in this proceeding the person charged with the offense of subjecting a workman to the danger of explosion, even though the explosion itself did not result from any offense.

We will now proceed to make specific application of the facts and of the law to the case of each defendant.

THE CASE OF JOSEPH COLLETT AND JOHN FERRI (or Selano)

These men are charged in the information of the mine inspector with violation of Rule 38, Article XII, in failing to notify the mine foreman or his assistants of the ignition, and must be declared not guilty under our finding of fact 4 and our findings of law 2 and 3.

THE CASE OF BERNARD HOLLERAN

This man is charged in the information of the mine inspector with failing immediately to examine the locality of ignition when notified thereof on the morning of May 12th, and in overruling or permitting a large number of men to go into the gangway with exposure to the danger of explosion.

The first part of this charge is not sustained by the proof and the second part may be considered in connection with the information of the county detective. In the latter he is charged (a) with violation of Section 9, Article VIII, by permitting Martin Tigue to act as fire boss without making certificate. This charge must be dismissed not only under our finding of law 4, but also under our finding of fact 3, because Tigue had the requisite experience and therefore his mere failure to make certificate could not possibly be connected with an accident as the cause thereof.

It was strenuously urged by the able Assistant District Attorney, that Tigue, besides being permitted to act as a mere fire boss without making certificate, was also permitted to perform the duty of an assistant mine foreman, under Rule 5, Article XII, without having received a mine foreman's certificate of qualification under Article VIII, but this offense is not specifically charged in the information nor is it clearly established by proof, and we must, therefore, decline to give to it further consideration.

He is further charged (b) with violation of Section 12, Article X, by neglecting to have extra main doors in the mine.

This charge must be dismissed because by Section 2, of Article X, the duty to place such doors in the first instance is expressly devolved upon the owner, operator or superintendent, and the mine foreman should not be held responsible for failure to place the doors, although he would be responsible for failure to have them properly maintained after being placed.

He is further charged (c) with violation of Rule 8, Article XII, in neglecting to use every precaution to insure the safety of the workmen, and (d) with violation of the same rule in not withdrawing all the workmen except those required to remove the danger.

The general averment of (c) must be restricted under the evidence to the specific averment of (d), and these charges must be dismissed under our finding of fact 6, that all the workmen were withdrawn except those engaged in removing the danger and such as the persons in charge of the situation honestly thought to be required

for that purpose, and because the place had been examined by a competent person and reported to be safe.

We may add as a further reason for dismissing the charges against Holleran, that the work was carried on under the supervision of Steele and Jones, his superiors, and the responsibility of dereliction, if any, should be visited upon them rather than upon the inferior, who simply executed their directions expressed or implied.

He is further charged (e) with being generally negligent, careless and derelict in the performance of his duties as mine foreman, but this general accusation must be restricted under the evidence to the specific matters already mentioned.

THE CASE OF GILBERT JONES, ASSISTANT MINE SUPERINTENDENT

This man is charged (a) with violation of Section 9, Article VIII, by permitting Martin Tigue to act as fire boss.

This charge must be dismissed for the same reason assigned in dismissing the same charge against Bernard Holleran.

He is further charged (b) with violation of Section 12, Article X, by neglecting to have placed extra main doors.

This charge must be dismissed because the duty devolved upon the superintendent and not upon the assistant mine superintendent.

The position of assistant mine superintendent is not defined by the Act, but under the evidence the duties imposed upon Jones made him no more than a general inside foreman.

As such, of course, he would be charged with the responsibility of having the extra main doors kept in working order when once installed, but not held responsible any more than the mine foreman for failure to place them in the first instance.

The Act does not require, and it would not be fair to visit punishment upon the inferior for the dereliction of a superior in this respect.

He is further charged (c) and (d) with general and specific violation of Rule 8, Article XII, which charges must be dismissed for the same reasons assigned in dismissing the same charges against Holleran.

He is further charged (e) with violation of Section 2, Article XIV, by not giving notice without delay to the inspector.

This charge must be dismissed because the duty devolved upon the superintendent, who is defined in Article XVIII to be the person having general supervision of one or more mines or collieries, and did not devolve upon the assistant mine superintendent, who did not have such general supervision and who should not suffer for the sin of his superior, especially as the latter was present.

This charge is dismissed for the further reason that under our finding of law 4, it is not an offense against the Act, properly embraced within the present proceeding.

He is further charged (f) with general failure to use every precaution, which under the evidence must be restricted to the specific charges above enumerated.

THE CASE OF GEORGE W. STEELE, SUPERINTENDENT

The charges against this man are the same as those against Jones, and those specified as (a), (c), (d), and (f) must be dismissed for the same reasons assigned in dismissing the same charges against the latter.

He is further charged (b) with violation of Section 12, Article X, by neglecting to have placed extra main doors.

This duty is expressly devolved upon him by the Act and he failed to perform it.

Upon the stand he acknowledged his ignorance of the requirement and pleaded as an excuse, in substance, that extra doors would have been superfluous.

He cannot plead ignorance against this charge of negligence, nor can he plead superfluity against the positive mandate of the law.

It was not for him to determine whether extra main doors were superfluous or otherwise.

The law commanded, and he was bound to obey.

The requirement is not only plain, but reasonable, and we cannot agree with the view that extra main doors were superfluous.

It was plainly intended that every main door should have a duplicate to perform the latter's functions if impaired by an accident.

They were placed in this mine after the accident.

If they had been in place at the time of the accident Metcalf and Smallcomb and perhaps other workmen engaged in repairing the doors would not have been required in the mine while the work of fighting the gas was being simultaneously carried on, and the accident to them at least might not have happened.

We cannot escape the conclusion that Steele in this respect was negligently guilty of an offense against the Act which was perhaps responsible for their death, and which demands his conviction on this charge.

He is further charged (e) with violation of Section 2, Article XIV, by not giving notice without delay to the inspector.

What constitutes "without delay" is a mixed question of law and fact, dependent upon the circumstances.

Under the circumstances of this case, and under the conditions existing in that mine as early as 5 o'clock on May 11th, we think that the notice should have been given at the very least as early as noon of May 12th.

If such notice had been given, it is quite possible, although not of course certain, that the inspector might have come to the scene and might have advised the course which he now says would have been proper, and that thus the fatal accident might have been averted.

This charge is dismissed for the reason already assigned that the failure to give notice is not an offense within the purview of the present proceeding.

But in the light of all that occurred, it is right to emphasize the peremptory duty of absolute compliance with every provision of this Act and the grave risk of failure to comply even in respects which may seem to be unimportant.

The conclusion of the whole matter is, that Joseph Collett and John Ferri, or Selano, the miners, Bernard Holleran, the mine foreman, and Gilbert Jones, the assistant mine superintendent, are adjudged innocent of all the charges presented against them in this proceeding, and that George W. Steele, superintendent, is adjudged innocent of all charges except that of neglecting to have placed extra main doors as required by Section 12, Article X, of which charge he is found guilty.

In fixing the punishment proper to be imposed upon this conviction in this proceeding, we should not be influenced by the dreadful nature of the catastrophe, but only by the intrinsic nature of the specific negligence established by this conviction.

The beneficent purpose of this Act should not be frustrated by any weak-kneed determination, nor by any rose water policy with those convicted under its provisions, but the Act itself is guilty of numerous ambiguities and infested with numerous difficulties which place its true meaning in many respects beyond the grasp of skillful construers and have baffled the Court in the present proceeding.

It is not a case where one who runs can read.

The provision relative to extra main doors, while plain to us upon careful study, is open to other construction.

By the general custom of reputable operators in the region, as we are informed, they have not been used, and by general opinion have not been considered necessary.

This does not excuse, but it may palliate.

Furthermore the connection of this offense with the accident to these men is in a measure conjectural and not certain.

Even had there been extra main doors in use at the time, these men might have been set to work just the same upon repairs to the main doors.

The connection, therefore, is not direct but remote, not sure but based upon conjecture.

These considerations suggest the propriety of suspending sentence in a case where conviction carries its own condign punishment, as in the contemporaneous case against Stinson and Williams.

Table showing number of mines, number of employees inside and outside, and production by districts—Anthracite and Bituminous—1908

Anthracite			Bituminous						
Districts	Number of mines	Number of employees in-side	Number of employees out-side	Production (gross tons)	Districts	Number of mines	Number of employees in-side	Number of employees out-side	Production (net tons)
First, -----	51	6,611	2,229	3,479,029	First, -----	44	8,647	1,246	7,267,212
Second, -----	35	8,309	2,608	4,824,542	Second, -----	57	6,259	2,410	6,017,729
Third, -----	29	8,269	2,313	4,674,902	Third, -----	92	6,001	757	8,435,972
Fourth, -----	30	6,516	1,915	4,277,375	Fourth, -----	80	7,773	1,351	5,378,628
Fifth, -----	32	6,633	2,281	4,009,163	Fifth, -----	61	5,069	3,005	5,788,549
Sixth, -----	39	7,723	2,588	4,280,768	Sixth, -----	76	9,670	1,509	6,961,858
Seventh, -----	44	7,865	2,783	4,009,684	Seventh, -----	65	9,756	935	6,266,067
Eighth, -----	33	7,143	2,297	3,937,977	Eighth, -----	116	7,117	735	3,401,827
Ninth, -----	26	8,326	2,904	5,500,580	Ninth, -----	44	4,533	2,933	4,789,743
Tenth, -----	38	6,592	2,921	4,008,661	Tenth, -----	96	8,564	1,017	4,870,728
Eleventh, -----	57	7,367	3,463	4,640,479	Eleventh, -----	48	4,275	2,740	4,839,404
Twelfth, -----	13	5,317	2,462	2,930,891	Twelfth, -----	92	9,384	1,615	5,973,325
Thirteenth, -----	29	3,247	3,323	3,234,033	Thirteenth, -----	43	8,442	1,045	7,135,404
Fourteenth, -----	26	3,769	2,167	2,528,519	Fourteenth, -----	70	7,216	807	6,128,260
Fifteenth, -----	30	5,875	2,357	3,066,231	Fifteenth, -----	110	9,822	2,496	6,064,065
Sixteenth, -----	38	4,764	2,212	2,337,395	Sixteenth, -----	59	7,919	2,496	7,717,757
Seventeenth, -----	37	5,079	2,843	3,829,108	Seventeenth, -----	60	8,730	856	5,308,051
Eighteenth, -----	41	4,488	2,497	2,775,369	Eighteenth, -----	122	6,220	572	2,853,970
Nineteenth, -----	45	4,652	2,442	2,766,785	Nineteenth, -----	37	7,943	1,245	7,953,454
Twentieth, -----	27	4,237	1,812	2,305,590	Twentieth, -----	93	7,776	1,986	5,756,540
Totals, -----	†702	124,233	50,270	74,592,181	Totals, -----	*1,102	152,536	29,304	114,937,375

*1,301 in operation, 1684 in operation.

ACCIDENTS

The tables herewith show the number of lives lost inside the mines during a period of ten years, 1899-1908, inclusive. The total number of fatalities was 4,559.

The first table shows that 2,263 or 49.64 per cent. were killed by falls; 690 or 15.13 per cent. by cars; 352 or 7.72 per cent. by explosions of gas and dust and 1,254 or 27.51 per cent. by miscellaneous causes. It also shows that in 1899 when the production was 54,034,224 tons, 389 lives were lost inside the mines or 138,905 tons were produced per life lost. In 1908 when the production was 74,592,181 tons, 596 lives were lost inside the mines or 125,155 tons were produced per life lost, a decrease in the number of tons produced per life lost of 13,750.

The second table shows the distribution of accidents by counties. In Luzerne, Lackawanna, Schuylkill and Northumberland, 2,163 lives were lost by falls; 645 by cars; 346 by explosions of gas and dust, and 1,146 by miscellaneous causes, making a total of 4,300 or 94.32 per cent. of the total number of accidents inside. For every 1,000 persons employed inside 4.30 lives were lost, and for every 1,000,000 tons of coal produced 7.45 lives were lost or one for every 134,178 tons. In the other counties, Carbon, Columbia, Dauphin, Susquehanna, Sullivan and Wayne, only 259 lives were lost inside by the different causes. For every 1,000 persons employed inside 3.74 lives were lost, and for every 1,000,000 tons of coal produced 5.88 lives were lost or one for every 170,049 tons.

The great number of fatalities that occur in the Pennsylvania mines show the necessity for remedial measures. Legislation of the proper kind would, no doubt, bring about a reduction, but the most prolific cause, carelessness on the part of the mine officials and employes, can be removed only by greater discipline; discipline that will enforce obedience to the laws and rules governing safety; discipline that will mete out severe punishment to the man in charge and to the employe, who by their carelessness and recklessness place in constant jeopardy the lives of the men in the mines.

Years	Killed by Falls		Killed by Cars		Killed by Explosions of Gas and Dust		Miscellaneous Cause ²		Total number of accidents inside	Inside employes	Production	Lives lost inside per 1,000 employed	Tons of coal produced per life lost inside	Lives lost inside per 1,000,000 tons produced
	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage						
1899, -----	226	58.10	51	13.11	28	7.20	84	21.50	989	92,167	54,084,224	4.22	138,005	7.20
1900, -----	175	48.88	00	16.76	38	10.62	85	23.74	378	91,140	51,217,318	3.80	143,065	6.99
1901, -----	226	51.25	69	13.65	33	7.48	113	23.62	441	98,434	50,915,931	4.48	135,841	7.36
1902, -----	116	47.35	42	17.14	20	8.16	67	27.35	243	98,377	33,911,510	2.49	150,650	6.64
1903, -----	210	49.30	70	16.43	26	6.10	120	28.17	426	172,035	67,171,361	4.17	157,681	6.31
1904, -----	238	47.98	71	14.32	30	6.05	157	31.65	496	110,362	65,769,238	4.49	132,478	7.53
1905, -----	265	53.54	82	14.88	33	5.99	141	25.59	531	116,371	70,250,564	4.73	127,492	7.83
1906, -----	214	46.93	67	14.69	43	9.43	132	28.96	456	114,998	64,410,277	3.97	141,261	7.08
1907, -----	279	46.42	88	14.64	44	7.32	190	31.62	601	117,849	76,836,082	5.10	127,847	7.82
1908, -----	284	47.65	90	15.10	57	9.57	165	27.68	506	124,233	74,592,181	4.80	125,195	7.99
Totals, -----	2,263	49.64	630	15.13	352	7.72	1,254	27.51	4,559	1,068,986	621,009,345	4.26	136,215	7.34

Counties	Killed by falls	Killed by cars	Killed by explosions of gas and dust	Killed by miscellaneous causes	Total number killed in side	Production	Employees inside	Lives lost inside per 1,000 employed	Tons of coal produced per life lost inside	Lives lost inside per 1,000,000 tons produced
Luzerne	894	280	179	400	1,813	221,536,797	391,372	4.63	126,606	7.90
Lackawanna	652	196	49	228	1,125	160,154,434	283,756	3.96	142,359	7.02
Schenck	432	130	80	352	994	139,163,068	227,021	4.38	140,005	7.14
Northumberland	185	39	38	106	368	41,110,118	97,573	3.77	128,017	7.81
Totals	2,163	645	346	1,146	4,300	576,966,417	999,722	4.30	134,178	7.45
Carbon	90	17	2	46	85	19,042,007	25,490	3.33	224,024	4.46
Columbia	22	7	1	23	53	3,826,788	14,582	3.71	185,411	5.39
Dauphin	16	8	3	35	62	6,615,133	14,044	4.41	107,180	9.33
Susquehanna	27	9	4	4	40	5,641,372	10,230	3.91	141,664	7.09
Sullivan	15	4	1	---	19	2,875,447	4,148	4.58	151,383	6.61
Wayne	---	---	---	---	---	1,012,081	1,070	---	---	---
Totals	100	45	6	108	259	44,042,828	69,264	3.74	170,049	5.88
Grand totals	2,263	690	352	1,254	4,559	621,009,345	1,068,986	4.25	136,216	7.34

Table showing tons of coal produced per fatal accident inside of mines, and number of persons killed per each 1,000 employes, 1902-1908

Years	Names of Companies	Production in tons of 2,000 pounds	Fatal accidents inside of mines	Production per fatal accident inside	Number of employes inside	Number killed per 1,000 employed
1902	Philadelphia and Reading Coal and Iron Company,	6,210,055	45	138,001	16,933	2.66
1903		11,257,488	67	168,022	14,576	4.56
1904		11,781,911	69	164,955	16,556	4.30
1905		12,856,674	89	144,457	20,024	4.44
1906		11,152,702	66	173,526	18,810	3.51
1907		13,781,161	87	158,404	19,963	4.56
1908		11,929,856	80	149,123	20,394	3.94
	Totals and averages, -----	78,839,847	503	156,799	125,756	4.00
1902	Delaware, Lackawanna and Western Railroad Company,	4,939,028	18	274,390	9,555	1.88
1903		8,639,009	40	215,989	10,772	3.71
1904		8,766,895	43	203,881	10,475	4.10
1905		5,562,584	53	104,953	12,363	4.31
1906		9,094,114	53	171,587	12,821	4.13
1907		10,359,661	73	141,913	13,394	5.45
1908		9,720,357	61	159,350	13,445	4.54
	Totals and averages, -----	57,082,149	341	167,396	82,765	4.12
1902	Delaware and Hudson Company, -----	3,632,776	13	297,444	9,692	1.44
1903		6,965,458	39	1,8,601	10,386	3.75
1904		6,165,009	21	293,571	11,152	1.83
1905		6,644,527	54	123,046	11,006	4.90
1906		6,205,875	22	282,085	10,387	2.10
1907		7,465,416	46	162,292	10,361	4.31
1908		7,446,775	36	206,855	11,630	3.10
	Totals and averages, -----	44,525,836	231	192,753	74,524	3.10
1902	Lehigh Valley Coal Company, -----	2,828,838	16	176,802	6,144	2.60
1903		6,482,112	47	137,917	8,333	5.64
1904		6,294,291	65	96,835	9,349	6.95
1905		7,687,354	54	142,358	9,991	5.40
1906		6,059,876	54	112,219	9,334	5.78
1907		7,479,197	43	173,935	9,238	4.64
1908		6,588,745	58	113,599	9,633	6.21
	Totals and averages, -----	43,420,415	337	128,844	62,042	5.43
1902	Lehigh and Wilkes-Barre Coal Company, -----	2,281,951	13	175,534	5,799	2.27
1903		4,467,281	24	186,136	5,450	4.42
1904		4,311,768	32	134,742	5,623	5.69
1905		4,679,009	27	173,296	6,161	4.38
1906		4,277,585	29	147,503	6,257	4.63
1907		4,985,157	56	89,021	6,059	8.42
1908		5,292,486	29	182,500	7,465	3.88
	Totals and averages, -----	30,295,237	210	144,263	43,355	4.85
1902	Pennsylvania Coal Company, -----	1,542,286	5	308,457	5,125	.97
1903		3,572,199	28	127,578	5,715	4.90
1904		3,412,514	26	131,251	6,363	3.96
1905		3,770,483	26	145,018	7,260	3.58
1906		3,607,912	28	128,854	7,021	3.98
1907		4,756,263	34	139,890	7,154	4.75
1908		5,168,193	38	136,005	7,364	5.06
	Totals and averages, -----	25,829,880	185	139,621	46,342	3.99

Table showing tons of coal produced per fatal accident inside of mines, and number of persons killed per each 1,000 employes, 1902-1908—Continued

Years	Names of Companies	Production in tons of 2,000 pounds	Fatal accidents inside of mines	Production per fatal accident inside	Number of employes inside	Number killed per 1,000 employed
1902	Susquehanna Coal Company, -----	1,825,433	9	202,826	5,242	1.72
1903		2,619,852	15	174,657	5,892	2.54
1904		2,784,929	15	185,662	5,050	2.97
1905		2,843,837	15	189,587	5,192	2.89
1906		3,042,423	29	104,911	5,054	5.71
1907		3,509,790	22	159,536	5,464	4.03
1908		3,325,048	41	81,099	5,386	7.61
	Totals and averages, -----	19,951,282	146	136,654	37,391	3.91
1902	Lehigh Coal and Navigation Company, -----	1,146,401	4	286,600	2,166	1.84
1903		2,267,392	11	206,126	2,471	4.45
1904		2,358,561	9	262,062	2,908	3.09
1905		2,770,788	13	213,137	3,467	4.10
1906		2,789,962	8	347,620	3,848	2.07
1907		3,559,378	16	222,461	3,430	4.07
1908		3,397,481	12	283,123	4,267	2.81
	Totals and averages, -----	18,280,963	73	250,424	22,757	3.21
1902	Scranton Coal Company, -----	1,651,686	6	275,281	3,778	1.59
1903		1,573,896	12	131,158	3,946	3.04
1904		2,691,577	15	179,438	4,155	3.37
1905		2,726,118	16	170,382	4,639	3.45
1906		2,336,193	16	146,012	4,573	3.50
1907		2,895,922	40	72,398	4,793	8.35
1908		2,786,801	23	121,165	4,869	4.72
	Totals and averages, -----	16,662,193	128	130,173	31,053	4.12
1902	Hillside Coal and Iron Company, -----	703,775	2	355,887	1,549	1.21
1903		1,896,337	11	135,452	2,674	5.23
1904		1,554,357	14	111,025	2,850	4.91
1905		1,755,441	12	146,287	2,701	4.44
1906		1,591,256	12	132,604	2,944	4.13
1907		1,777,217	21	84,629	2,508	7.48
1908		1,539,876	10	153,986	2,592	3.86
	Totals and averages, -----	10,818,239	85	127,273	18,178	4.68
1902	Coxe Brothers and Company, Incorporated, -----	681,145	5	116,229	1,911	4.20
1903		1,465,432	7	209,919	1,568	4.64
1904		1,392,952	9	198,993	1,605	5.61
1905		1,472,278	8	184,035	1,296	6.17
1906		1,359,883	1	1,359,883	1,426	7.00
1907		1,561,577	7	223,082	1,521	4.60
1908		1,479,828	2	164,425	1,682	5.35
	Totals and averages, -----	9,412,005	46	204,633	10,229	4.50
1902	Kingston Coal Company, -----	719,456	9	78,940	1,471	6.12
1903		1,201,070	7	171,581	1,499	4.62
1904		1,289,398	5	257,880	1,658	3.02
1905		1,326,893	6	221,159	1,508	3.32
1906		1,339,353	8	167,419	1,775	4.51
1907		1,706,643	8	213,330	2,073	3.86
1908		2,202,256	13	169,404	2,387	5.45
	Totals and averages, -----	9,776,069	56	174,573	12,371	4.42

Table showing tons of coal produced per fatal accident inside of mines, and number of persons killed per each 1,000 employes, 1902-1908—Continued

Years	Names of Companies	Production in tons of 2,000 pounds	Fatal accidents inside of mines	Production per fatal accident inside	Number of employes inside	Number killed per 1,000 employed
1902	Mineral Railroad and Mining Company, -----	479,207	14	34,229	1,522	8.79
1903		830,075	4	207,519	1,787	2.23
1904		649,785	1	649,785	1,419	.58
1905		653,978	11	59,453	1,489	7.39
1906		645,108	5	129,022	1,349	3.71
1907		694,145	6	115,691	1,231	4.87
1908		593,634	8	74,204	1,269	6.30
	Totals and averages -----	4,545,932	49	92,774	10,446	4.70
1902	St. Clair Coal Company, -----	354,597	2	177,299	259	7.72
1903		526,163	1	526,163	344	2.91
1904		477,570	1	477,570	419	2.39
1905		564,928	4	141,232	490	8.16
1906		565,983	2	282,992	502	3.98
1907		693,066	3	231,022	497	6.04
1908		552,496	3	184,165	447	5.48
	Totals and averages -----	3,734,803	16	233,425	3,058	5.23
1902	Price-Panecost Coal Company, -----	392,507	2	196,254	655	3.05
1903		550,701	1	550,701	707	1.41
1904		240,504	1	240,504	717	1.39
1905		608,945	6	101,491	1,970	5.61
1906		674,422	5	134,884	1,039	4.68
1907		741,616	5	148,323	1,093	4.57
1908		730,812	7	104,410	1,129	6.20
	Totals and averages -----	3,930,567	27	145,910	6,440	4.19
1902	Temple Iron Company, -----	970,528	9	107,836	2,413	3.73
1903		1,311,008	15	87,400	2,380	6.30
1904		1,309,722	15	89,315	2,447	6.13
1905		1,391,530	16	86,971	2,630	6.27
1906		822,563	5	164,513	1,919	2.60
1907		1,294,818	19	68,149	2,215	8.35
1908		986,942	20	49,347	2,114	9.46
	Totals and averages -----	8,117,131	99	81,591	16,098	6.14
1902	G. B. Markle and Company, -----	532,319	3	177,783	1,705	1.76
1903		1,222,494	4	305,624	1,511	2.65
1904		1,207,416	5	241,483	1,474	3.39
1905		1,203,885	5	240,777	1,389	3.57
1906		958,274	7	136,896	1,147	6.10
1907		1,090,741	6	183,290	1,228	4.89
1908		1,155,325	9	128,369	1,350	6.62
	Totals and averages -----	7,380,484	39	189,243	9,825	3.97
1902	Parrish Coal Company, -----	413,882	1	413,882	1,123	.89
1903		905,823	3	301,911	1,222	2.45
1904		775,259	6	129,209	1,260	4.65
1905		770,161	5	154,032	1,244	4.02
1906		579,381	13	44,568	56	3.60
1907		623,830	6	103,972	1,023	5.81
1908		531,189	1	531,189	969	1.03
	Totals and averages -----	4,599,525	35	131,415	7,817	4.47

Table showing tons of coal produced per fatal accident inside of mines, and number of persons killed per each 1,000 employes, 1902-1908—Continued

Years	Names of Companies	Production in tons of 2,000 pounds	Fatal accidents inside of mines	Production per fatal accident inside	Number of employes inside	Number killed per 1,000 employed
1902	} Mill Creek Coal Company, -----	310,170	1	310,170	473	2.11
1903		530,455	1	530,455	329	1.89
1904		519,729	4	129,932	624	6.41
1905		572,334	7	81,762	624	11.22
1906		486,832	7	69,547	615	11.38
1907		618,302	2	309,151	635	3.15
1908		739,700	5	92,463	690	11.59
	Totals and averages, -----	3,777,522	30	125,850	4,190	6.21
1902	} A. Pardee and Company, -----	195,492	2	97,746	726	2.75
1903		536,643	2	268,322	756	2.65
1904		559,567	5	111,913	807	6.20
1905		573,427	5	114,685	319	6.11
1906		522,826	4	130,707	982	4.54
1907		614,934	5	122,987	947	5.28
1908		562,635	4	140,650	920	4.30
	Totals and averages, -----	3,565,524	27	132,056	5,867	4.60
1902	} Pardee Brothers and Company, -----	221,359	2	110,680	331	6.04
1903		380,895	2	190,448	334	5.21
1904		503,835	5	100,767	751	9.07
1905		569,095	2	284,543	700	2.85
1906		545,750	1	545,750	707	1.41
1907		609,253	3	203,084	781	3.84
1908		552,263	3	184,088	723	4.15
	Totals and averages -----	3,382,450	18	187,914	4,177	4.31
1907	} West End Coal Company, -----	765,722	5	153,144	931	5.37
1908		808,861	8	101,103	1,144	6.99
	Totals and averages, -----	1,574,583	13	121,122	2,075	6.26
1907	} Hudson Coal Company, -----	714,424	6	119,071	1,345	4.49
1908		796,796	7	113,823	1,583	4.42
	Totals and averages. -----	1,511,220	13	116,248	2,928	4.46
1907	} Sterrick Creek Coal Company, -----	663,935	3	221,312	716	4.19
1908		609,687	5	121,937	798	6.27
	Totals and averages, -----	1,273,622	8	159,203	1,514	5.28
1908	Jermyn and Company, -----	648,244	7	92,606	858	8.16
1908	Summit Branch Mining Company, -----	818,005	9	94,223	1,481	6.08
1907	} Miscellaneous companies, -----	13,085,224	79	165,636	18,350	4.30
1908		11,204,442	87	128,786	17,487	4.98
	Totals and averages, -----	24,289,666	166	146,322	35,867	4.63

Nationality of Employees Killed by Falls in the Anthracite Region, 1908

Nationality of Employees	First	Second	Third	Fourth	Fifth	Sixth	Seventh	Eighth	Ninth	Tenth	Eleventh	Twelfth	Thirteenth	Fourteenth	Fifteenth	Sixteenth	Seventeenth	Eighteenth	Nineteenth	Twentieth	Total	Percentage
American, -----	1	2	3	1	2	3			3	1	4				2	3	1	2	1	5	30	} 25.35
English, -----	1	1	1	1	1		2		1	1	1			1		1			1	1	12	
Welsh, -----		1	1						1	2										1	17	
Scottish, -----																					1	
Irish, -----	1		2	2		5	5					1			1						16	
German, -----		8	6	7	7	5	5	11	9	10	5	1	2	1	4	5	1	2	2		95	
Polish, -----	3										2										6	
Hungarian, -----			5								2										7	
Italian, -----	4	3			1	2	2	3			1		1								17	
Slovakian, -----		4	1	1	2		1	4	1	1	5		1	2	1	1	1			3	26	
Lithuanian, -----	3	1	2	2		1	2	1	3		1	10	5	1	1	1		4	3		39	
Austrian, -----	2					2	1	1			1							1			8	
Russian, -----	1	2		2	1	1	1	1	1	2		1			1	3		1	1		18	
Greek, -----												1							1		2	
Totals, -----	16	22	19	16	14	10	20	21	18	17	19	13	12	5	10	13	3	11	10	6	284	100.00

ACCIDENTS BY COUNTIES AND DISTRICTS, 1908

The table herewith shows by counties and districts the chief causes of fatal accidents in the Anthracite mines during the year. The most prolific causes were falls, cars, explosions of gas and dust, and electricity, in the order named

Districts	Names of Counties or Parts of Counties in Each District	Accidents by falls	Percentage of accidents inside by falls	Accidents by explosions of gas	Percentage of accidents inside by explosions of gas and dust	Accidents by cars inside	Percentage of accidents by cars	Accidents inside by electricity	Percentage of accidents inside by electricity	Miscellaneous accidents inside	Percentage of accidents inside by miscellaneous causes	Total number of accidents
First,	Lackawanna, Susquehanna, Wayne,	76	66.67			7	20.88			3	12.50	24
Second,	Lackawanna,	22	59.46			3	8.11			12	32.43	37
Third,	Lackawanna,	19	54.29			5	14.28			11	31.43	35
Fourth,	Lackawanna,	16	51.61	3	9.68	4	12.90			8	25.81	31
Fifth,	Lackawanna, Luzerne, Sullivan,	14	58.33			6	25.00			4	16.67	24
Sixth,	Luzerne,	19	52.78	1	11.11	5	13.89			8	22.22	36
Seventh,	Luzerne,	20	59.22	6	11.76	13	25.49			12	29.33	51
Eighth,	Luzerne,	21	42.00	13	26.00	6	12.00	1	2.00	9	18.00	30
Ninth,	Luzerne,	18	45.65	7	18.92	4	10.81			8	21.62	37
Tenth,	Luzerne,	17	41.66	4	9.76	4	9.76			16	39.02	41
Eleventh,	Carbon, Luzerne,	19	50.00			6	15.79			13	31.21	38
Twelfth,	Schuylkill,	13	56.52	1	4.35	6	15.79			5	21.74	23
Thirteenth,	Schuylkill,	12	42.86	8	28.57	4	17.39			3	28.57	28
Fourteenth,	Columbia, Schuylkill,	5	41.67							3	25.00	12
Fifteenth,	Northumberland,	10	38.46	3	11.54	3	11.54			10	38.46	26
Sixteenth,	Northumberland,	13	56.52			3	13.04			7	30.44	23
Seventeenth,	Carbon, Schuylkill,	3	21.43	1	7.14	3	13.04			7	30.44	23
Eighteenth,	Schuylkill,	11	42.30	3	11.54	6	23.08			6	23.08	26
Nineteenth,	Schuylkill,	10	45.45	4	18.18	2	9.09			6	27.27	22
Twentieth,	Dauphin, Schuylkill,	6	33.33			4	22.22			8	44.45	18
		284	47.65	57	9.56	90	15.10	1	.17	164	27.52	506

Table showing causes of fatal accidents inside of mines; average production per accident, and percentage of employes killed, by counties, 1902-1908

Years	County	Number of mines	Number of inside employes	Production in tons	Fatal accidents by explosions of gas	Fatal accidents by falls	Total fatal accidents inside	Production in tons per fatal accidents inside	Percentage killed per 1,000 employes
1902	Luzerne, -----	229	35,491	12,750,296	7	36	93	137,100	2.62
1903		233	38,370	23,926,481	15	75	169	141,577	4.40
1904		256	41,603	23,922,219	8	106	200	119,616	4.81
1905		254	43,109	25,187,313	14	122	215	117,150	4.99
1906		271	41,643	23,760,886	27	84	194	122,479	4.66
1907		243	42,022	27,517,390	10	105	223	123,531	5.30
1908		243	46,302	28,329,462	34	116	258	109,834	5.57
Totals and averages,		-----	288,540	165,423,116	124	644	1,352	122,355	4.68
1902	Lackawanna, -----	118	25,931	8,613,772	-----	23	43	200,320	1.66
1903		114	27,755	16,480,012	3	59	107	154,019	3.86
1904		116	30,500	15,241,462	7	62	115	132,534	3.77
1905		125	30,833	15,997,657	2	82	127	125,936	4.12
1906		157	31,196	16,821,929	4	70	112	159,196	3.59
1907		155	32,444	20,029,829	16	87	174	115,114	5.36
1908		162	32,296	19,314,281	3	80	141	136,981	4.37
Totals and averages,		-----	210,975	112,498,972	35	463	819	137,366	3.88
1902	Schuylkill, -----	76	20,876	7,041,281	3	37	60	117,355	2.87
1903		76	20,144	14,633,487	6	44	88	166,290	4.37
1904		106	22,212	14,052,467	8	43	107	131,311	4.80
1905		182	25,716	15,481,627	11	60	136	113,855	5.29
1906		153	25,365	14,621,909	7	32	94	155,572	3.70
1907		140	25,181	18,000,866	3	45	123	146,349	4.88
1908		179	26,625	16,247,036	17	54	121	134,273	4.54
Totals and averages,		-----	166,179	100,078,703	55	318	729	137,282	4.39
1902	Northumberland, -----	28	9,670	2,789,517	10	10	34	84,397	3.52
1903		26	9,312	4,916,105	2	21	35	140,460	3.76
1904		52	9,248	4,784,846	6	15	39	122,688	4.22
1905		54	9,823	4,797,322	5	21	42	114,212	4.28
1906		70	9,585	4,792,408	3	17	32	140,762	3.74
1907		60	10,653	5,951,243	5	23	45	132,250	4.22
1908		68	10,639	5,417,626	3	23	49	110,564	4.61
Totals and averages,		-----	68,930	33,499,067	34	130	276	121,373	4.00
1902	Carbon, -----	10	2,242	939,220	-----	1	4	234,805	1.76
1903		15	2,120	1,905,033	-----	2	13	146,511	6.13
1904		20	2,381	2,012,064	-----	2	7	287,438	2.94
1905		23	2,460	2,211,077	-----	-----	9	245,675	3.66
1906		23	2,740	2,006,092	1	2	6	331,348	2.19
1907		30	2,989	2,466,538	1	3	14	176,181	4.68
1908		22	3,531	2,486,559	-----	4	9	276,284	2.55
Totals and averages,		-----	18,463	14,026,588	2	14	62	236,235	3.36
1902	Columbia, -----	6	1,438	206,134	-----	-----	3	68,711	2.08
1903		5	1,451	1,208,843	-----	-----	3	402,918	2.06
1904		10	1,419	1,028,236	-----	7	10	102,824	7.04
1905		9	1,567	1,097,914	-----	2	7	156,849	4.47
1906		7	1,403	865,237	1	3	7	123,605	4.99
1907		8	1,468	1,060,954	-----	1	4	265,239	2.72
1908		9	1,559	1,055,648	-----	2	5	211,130	3.21
Totals and averages,		-----	10,308	6,522,996	1	15	39	167,256	3.78

Table showing causes of fatal accidents inside of mines; average production per accident, and percentage of employes killed, by counties, 1902-1908—Continued

Years	County	Number of mines	Number of inside employes	Production in tons	Fatal accidents by explosions of gas	Fatal accidents by falls	Total fatal accidents inside	Production in tons per fatal accidents inside	Percentage killed per 1,000 employes
1902	Dauphin, -----	2	1,120	377,983	-----	-----	1	377,983	.83
1903		2	1,256	654,437	-----	3	5	130,887	3.98
1904		9	1,269	645,906	1	-----	*11	58,719	8.67
1905		10	1,350	645,648	1	1	5	129,129	3.70
1906		10	1,422	656,003	-----	3	3	218,667	2.11
1907		12	1,393	741,054	-----	2	5	148,210	3.59
1908		12	1,481	757,147	-----	1	9	84,127	6.08
Totals and averages, -----		-----	10,308	4,478,178	2	10	39	114,825	3.78
1902	Susquehanna, -----	2	1,086	404,248	-----	2	2	202,124	1.84
1903		2	1,064	714,976	-----	4	6	119,163	5.64
1904		2	1,102	618,250	-----	2	6	103,042	5.44
1905		2	1,026	607,273	-----	6	6	101,212	5.85
1906		3	1,028	501,877	-----	2	6	83,646	5.83
1907		3	970	575,079	-----	9	12	47,923	12.37
1908		1	1,005	435,625	-----	2	2	217,813	1.99
Totals and averages, -----		-----	7,281	3,857,328	-----	27	40	96,433	5.49
1902	Sullivan, -----	3	523	365,194	-----	3	5	73,039	9.56
1903		3	455	262,012	-----	2	2	131,001	4.40
1904		3	443	262,772	-----	1	1	262,772	2.26
1905		4	331	277,229	-----	1	2	138,614	6.04
1906		4	414	320,203	-----	1	2	160,101	4.83
1907		4	459	386,697	-----	1	1	386,697	2.18
1908		4	583	491,708	-----	2	2	245,854	3.43
Totals and averages, -----		-----	3,203	2,365,805	-----	11	15	157,720	4.68
1902	Wayne, -----	1	125	61,513	-----	-----	-----	-----	-----
1903		1	125	68,172	-----	-----	-----	-----	-----
1904		1	136	59,829	-----	-----	-----	-----	-----
1906		3	202	63,733	-----	-----	-----	-----	-----
1907		3	270	76,423	-----	-----	-----	-----	-----
1908		2	212	57,050	-----	-----	-----	-----	-----
Totals and averages, -----		-----	1,070	386,729	-----	-----	-----	-----	-----

*Williamstown disaster.

Number of miners and miners' laborers employed in the mines; number killed and ratio of each class killed per 1,000 employed; average number of days worked by breakers; average production per day worked by breakers; 1881 to 1908

Years	Number of miners employed	Number of miners killed	Number of miners killed per 1,000 employed	Number of miners' laborers employed	Number of miners' laborers killed	Number of miners' laborers killed per 1,000 employed	Average number of days worked by breakers	Average production per days worked by breakers, gross tons
1881, -----	22,809	114	4.99	16,726	70	4.19	221	138,181
1882, -----	22,843	135	5.91	15,229	56	3.68	218	143,584
1883, -----	25,319	136	5.37	16,870	67	3.97	232	145,272
1884, -----	27,100	132	4.87	19,606	81	4.13	192	169,590
1885, -----	25,305	160	5.65	20,128	86	4.27	204	167,331
1886, -----	25,970	131	5.04	17,068	68	3.98	196	177,437
1887, -----	29,538	102	3.45	17,548	57	3.25	208	180,981
1888, -----	34,547	169	4.89	21,952	87	3.96	218	191,002
1889, -----	50,504	191	6.35	19,368	79	4.08	197	197,837
1890, -----	28,236	146	5.05	18,620	95	5.10	210	191,268
1891, -----	30,552	180	5.89	19,590	110	6.07	213	208,339
1892, -----	20,779	180	5.84	22,110	111	5.02	202	226,428
1893, -----	32,881	195	5.93	22,853	108	4.73	202	233,562
1894, -----	33,357	218	6.54	23,942	91	3.80	175	260,035
1895, -----	24,533	179	5.18	24,638	115	4.67	187	271,939
1896, -----	37,063	204	5.51	26,530	134	5.09	170	282,790
1897, -----	36,332	210	5.69	27,277	99	3.63	151	310,310
1898, -----	36,377	176	4.84	24,060	124	5.15	151	312,220
1899, -----	36,421	199	5.46	23,946	114	4.75	179	301,867
1900, -----	36,832	184	4.99	24,613	95	3.86	176	291,037
1901, -----	37,804	224	5.92	26,265	122	4.64	195	307,210
1902, -----	56,392	114	3.13	25,443	62	2.44	*116	†318,203
1903, -----	34,823	204	5.49	27,533	110	4.00	211	318,350
1904, -----	39,848	233	5.85	31,217	145	4.64	213	308,494
1905, -----	42,078	308	7.32	31,967	148	4.63	208	337,599
1906, -----	41,801	226	5.41	29,652	133	4.48	206	312,671
1907, -----	43,035	300	7.18	29,984	136	4.54	227	338,485
1908, -----	44,340	313	7.05	32,853	154	4.68	211	353,517

*Strike during the year.

†Washeries worked during the strike. The time was not computed in the average days worked.

Number of employes inside and outside of mines; number of fatal accidents; number of fatal accidents per 1,000 employes; number of tons of coal mined per fatal accident inside, 1881 to 1908

Years	Number of employes inside of mines	Number of fatal accidents inside	Number of lives lost inside per 1,000 employed	Production of coal in tons of 2,000 pounds for each life lost inside	Number of employes outside of mines	Number of fatal accidents outside	Number of lives lost outside per 1,000 employed	Number of lives lost inside and outside per 1,000 employed
1881, -----	65,619	234	5.13	146,165	30,412	39	1.28	3.59
1882, -----	50,764	254	4.92	140,230	31,436	41	1.30	3.54
1883, -----	56,268	274	4.87	137,764	35,153	49	1.39	3.53
1884, -----	61,922	285	4.62	127,513	39,151	46	1.17	3.28
1885, -----	62,901	290	4.61	131,834	37,419	42	1.12	3.31
1886, -----	63,930	236	3.69	165,046	39,114	43	1.10	2.71
1887, -----	67,716	270	3.99	156,153	38,801	46	1.19	2.97
1888, -----	78,688	317	4.03	147,114	43,530	47	1.08	2.98
1889, -----	74,178	339	4.57	128,763	45,486	58	1.28	3.32
1890, -----	73,613	323	4.39	139,276	46,306	55	1.19	3.15
1891, -----	76,569	372	4.86	133,606	46,739	56	1.20	3.47
1892, -----	82,088	361	4.40	141,903	48,212	57	1.18	3.21
1893, -----	86,787	388	4.49	136,188	51,682	68	1.32	3.30
1894, -----	87,901	368	4.19	138,497	52,038	78	1.50	3.19
1895, -----	89,251	351	3.97	160,872	54,454	67	1.23	2.93
1896, -----	94,798	439	4.54	125,217	55,290	72	1.30	3.34
1897, -----	95,812	372	3.88	141,317	53,745	51	.95	2.83
1898, -----	91,171	360	3.95	146,674	51,249	51	.99	2.89
1899, -----	92,167	389	4.22	155,574	48,437	72	1.49	3.28
1899, -----	94,140	358	3.80	160,233	49,684	53	1.07	2.83
1900, -----	98,434	441	4.48	152,132	49,217	72	1.46	3.47
1901, -----	98,377	245	*2.49	168,739	49,762	55	1.11	2.03
1902, -----	102,055	426	4.17	176,602	49,772	92	1.85	3.41
1903, -----	110,362	496	4.49	148,376	50,968	99	1.94	3.69
1904, -----	116,371	551	4.73	142,735	51,883	93	1.79	3.82
1905, -----	114,998	456	3.97	141,250	51,177	101	1.98	3.35
1906, -----	117,849	601	5.10	143,189	50,925	107	2.10	4.20
1907, -----	124,233	596	4.79	140,173	50,270	82	1.63	3.88

*Year of the big strike, when an average of only 116 days was worked by the collieries.

Table A.A.—Number of tons of coal mined, number of days worked, number of persons employed, number killed and injured, quantity of powder and dynamite used, etc.

Districts	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in gross tons	Average number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Number of kegs of powder used	Number of pounds of dynamite used	Number of horses and mules
First,	3,110,073	308,552	51,404	3,470,029	180	8,840	52	67	196,783	316,211	797
Second,	4,376,100	406,000	42,432	4,824,532	235	10,917	44	56	202,951	402,811	941
Total,	4,099,888	418,026	126,083	4,674,902	180	10,522	39	69	290,654	268,088	1,822
Third,	3,092,288	136,062	149,025	4,277,375	213	8,431	33	43	172,717	201,400	825
Fourth,	3,698,110	260,066	50,057	4,009,163	165	8,331	28	53	116,054	50,280	500
Fifth,	3,888,639	355,199	37,060	4,280,768	193	10,261	41	92	176,969	339,496	1,087
Sixth,	4,433,433	483,301	212,810	5,069,484	178	10,648	53	77	133,848	411,856	1,275
Seventh,	3,428,853	386,381	3,165,977	197	9,400	93	93	126,324	1,011,842	1,102	
Eighth,	4,355,853	408,774	136,332	5,300,389	138	11,030	42	69	142,115	139,101	1,306
Ninth,	3,609,017	350,278	49,406	4,008,601	258	8,813	48	63	113,781	464,028	763
Tenth,	3,896,387	682,804	130,258	4,609,179	203	11,270	41	82	57,736	1,393,671	1,250
Eleventh,	2,565,502	339,243	46,096	2,950,891	217	7,879	28	28	66,656	421,383	665
Twelfth,	2,851,468	469,203	53,792	3,291,033	213	8,570	37	36	38,821	533,736	616
Thirteenth,	2,217,497	271,685	36,397	2,525,549	234	5,927	16	37	11,726	608,108	629
Fourteenth,	2,697,818	322,427	39,486	3,060,251	211	8,695	28	26	58,175	802,427	768
Fifteenth,	2,008,408	281,702	66,785	2,357,315	206	6,916	25	38	56,115	338,815	727
Sixteenth,	3,225,413	393,197	110,558	3,829,168	226	7,912	20	42	8,556	1,199,018	641
Seventeenth,	2,385,631	391,111	28,514	2,775,369	259	6,985	31	70	45,334	667,205	636
Eighteenth,	2,251,018	472,001	37,767	2,760,786	234	7,001	26	26	39,917	616,311	587
Nineteenth,	1,950,228	316,426	38,036	2,305,590	258	6,049	18	45	22,610	377,128	571
Twentieth,	65,631,637	7,428,600	1,532,044	74,592,181	211	174,503	678	1,170	1,975,292	10,766,245	16,837
Totals 1908,											

Table AA.—Number of tons of coal mined, number of days worked, number of persons employed, number killed and injured, quantity of powder and dynamite used, etc.

	Number of tons of coal shipped to market	Number of tons used at colleries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in Gross tons	Average number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Number of kegs of powder used	Number of pounds of dynamite used	Number of horses and mules
Totals 1907,	67,980,970	7,826,999	1,518,133	76,836,082	227	168,774	708	1,969	1,905,468	10,544,781	17,125
Totals 1906,	56,024,052	6,426,911	1,359,334	64,410,277	206	163,175	557	1,212	1,611,083	7,980,733	16,972
Totals 1905,	62,441,134	6,350,280	1,420,140	70,220,554	208	168,254	644	1,289	1,992,820	8,353,594	17,500
Totals 1904,	58,158,288	6,171,748	1,379,222	65,709,258	213	161,330	595	1,047	1,791,192	6,519,312	17,085
Totals 1903,	60,239,104	5,710,341	1,290,506	67,171,951	211	158,827	518	1,325	1,701,176	5,317,422	16,872
Totals 1902,	31,531,813	4,424,779	834,957	36,911,549	116	148,141	309	641	845,147	2,130,965	16,139
Totals 1901,	53,447,902	5,279,375	1,178,674	59,905,951	195	147,651	513	1,243	1,520,804	4,155,685	16,059
Totals 1900,	45,271,608	4,880,932	1,064,778	51,217,318	171	143,826	411	1,057	1,237,180	3,434,641	15,708

TABLE AA —Continued

Districts	Number of Boilers				Locomotives			Number of steam engines of all classes	Total horse power	Number of pumps delivering water to surface	Capacity in Gallons per minute	Quantity delivered to surface per minute—gallons	Number of electric dynamos	Number of air compressors	
	Cylindrical	Horse power	Tubular	Horse power	Total horse power	Locomotives									
						Steam	Air								Electric
First, -----	64	1,730	114	13,300	15,030	23	11	34	244	20,095	66	73,410	34,000	14	9
Second, -----	54	1,928	114	19,591	21,519	38	8	30	297	20,315	52	33,634	33,600	14	13
Third, -----	90	2,321	101	17,180	19,501	6	23	33	299	20,151	30	37,603	21,361	12	13
Fourth, -----	53	3,788	68	16,132	19,920	10	---	59	239	16,255	39	31,517	20,582	14	4
Fifth, -----	62	1,330	93	15,600	16,930	14	---	60	265	14,555	35	43,289	23,462	13	6
Sixth, -----	29	637	159	29,657	27,354	25	11	36	448	23,747	46	46,340	24,532	10	28
Seventh, -----	36	681	140	29,107	30,083	12	8	22	598	49,341	43	39,489	20,441	8	28
Eighth, -----	16	4,030	134	24,373	28,923	12	3	22	565	20,792	65	58,145	37,377	19	15
Ninth, -----	141	4,275	128	24,440	28,715	12	3	21	501	42,426	29	46,647	17,396	7	23
Tenth, -----	33	1,455	95	20,619	21,804	25	13	27	218	26,018	32	28,392	14,024	9	22
Eleventh, -----	114	3,750	268	46,385	50,135	0	12	7	467	48,481	101	100,381	57,208	10	26
Twelfth, -----	12	860	150	21,130	21,510	13	12	5	175	29,805	29	52,065	12,997	2	10
Thirteenth, -----	3	680	162	25,680	26,360	31	4	0	294	31,639	30	39,132	14,879	3	12
Fourteenth, -----	40	1,539	107	19,572	17,131	21	5	0	157	17,258	31	41,648	29,126	2	5
Fifteenth, -----	12	360	142	22,490	22,850	16	3	7	209	25,680	48	48,729	29,923	4	15
Sixteenth, -----	18	592	132	17,010	17,602	20	---	184	184	22,708	52	24,532	24,532	4	14
Seventeenth, -----	4	296	161	31,364	31,570	28	20	23	229	13,140	28	45,744	16,320	8	12
Eighteenth, -----	132	5,645	180	23,200	28,903	31	6	0	260	20,763	49	53,466	36,375	6	16
Nineteenth, -----	10	468	136	28,659	29,118	21	---	17	233	39,963	56	37,266	13,613	8	15
Twentieth, -----	57	2,300	188	22,925	25,225	17	---	17	215	32,804	21	22,880	8,304	8	0
Totals, -----	980	38,175	2,812	462,015	500,100	489	144	425	6,408	548,077	902	956,390	482,802	183	292

TABLE A.—Number of each class of employes in each district

	Districts									
	First	Second	Third	Fourth	Fifth	Sixth	Seventh	Eighth	Ninth	Tenth
Occupations of Persons Employed Inside										
Mine foremen, -----	28	27	30	21	22	29	24	21	22	13
Assistant mine foremen, -----	21	25	12	13	22	45	49	33	22	21
Fire bosses and assistants, -----	1	35	67	50	24	28	58	47	65	61
Miners, -----	2,313	2,933	2,632	2,198	2,203	2,769	2,969	3,003	2,650	2,325
Drivers and runners, -----	2,445	2,788	2,611	2,200	1,984	2,372	2,097	1,663	2,754	2,154
Doorboys and helpers, -----	851	1,006	620	529	529	1,029	854	870	961	607
Pumpmen, -----	159	229	137	163	141	170	349	220	319	209
Company men, -----	54	67	53	51	52	63	76	116	56	45
All other employes, -----	362	609	607	426	588	743	511	484	619	607
Totals, -----	6,611	8,309	8,209	6,516	6,053	7,723	7,865	7,143	8,326	6,592
Occupations of Persons Employed Outside										
Superintendents, -----	16	9	14	2	10	3	4	4	7	3
Foremen, -----	24	18	28	23	17	17	27	18	22	10
Blacksmiths and carpenters, -----	114	166	123	98	117	177	118	167	192	138
Engineers and firemen, -----	223	281	243	177	213	280	390	283	335	291
Slate pickers (boys), -----	419	417	542	492	639	593	513	563	475	441
Slate pickers (men), -----	280	161	250	74	209	247	220	138	360	118
Bookkeepers and clerks, -----	33	96	63	45	41	40	48	46	43	41
All other employes, -----	1,120	1,220	1,000	1,004	1,035	1,251	1,433	1,138	1,270	1,179
Totals, -----	2,229	2,608	2,313	1,915	2,281	2,538	2,782	2,297	2,704	2,221
Grand totals inside and outside, -----	8,840	10,917	10,522	8,431	8,334	10,261	10,648	9,440	11,030	8,813

TABLE A —Continued

	Districts										Grand totals inside and outside
	Eleventh	Twelfth	Thirteenth	Fourteenth	Fifteenth	Sixteenth	Seventeenth	Eighteenth	Nineteenth	Twentieth	
Occupations of Persons Employed Inside											
Mine foremen, -----	36	12	16	18	17	16	27	18	19	13	429
Assistant mine foremen, -----	71	72	68	43	56	41	12	26	44	52	751
Fire bosses and assistants, -----	14	5	16	8	20	35	50	23	32	13	658
Miners, -----	8,101	1,784	1,454	1,662	2,065	2,038	1,270	1,761	1,875	1,879	44,340
Miners' laborers, -----	1,631	1,323	1,353	832	935	896	564	844	877	595	32,833
Drivers and runners, -----	519	351	353	268	414	296	331	303	278	271	1,968
Doorboys and helpers, -----	106	84	58	111	82	57	86	67	50	63	2,670
Pumpmen, -----	94	26	50	29	69	34	40	50	33	30	1,088
Company men, -----	706	494	850	587	696	567	1,170	711	675	737	12,869
All other employes, -----	1,659	1,260	1,024	800	885	764	1,583	685	769	1,094	16,307
Totals, -----	7,367	5,417	5,247	3,760	5,875	4,764	5,079	4,488	4,652	4,237	124,233
Occupations of Persons Employed Outside											
Superintendents, -----	15	8	7	8	6	6	4	12	9	4	141
Foremen, -----	32	15	25	16	19	14	25	28	24	17	419
Blacksmiths and carpenters, -----	282	104	148	108	157	124	112	156	129	102	2,882
Engineers and firemen, -----	485	246	339	308	300	258	813	349	297	260	5,800
Slate pickers (boys), -----	470	651	659	330	571	401	343	410	414	204	9,557
Slate pickers (men), -----	334	228	210	153	150	100	295	200	173	32	4,292
Bookkeepers and clerks, -----	64	46	63	30	42	38	41	38	54	30	872
All other employes, -----	2,221	1,169	1,872	1,289	1,476	1,181	1,610	1,304	1,342	1,163	26,367
Totals, -----	3,903	2,462	3,323	2,167	2,730	2,212	2,833	2,497	2,442	1,812	50,270
Grand totals inside and outside, -----	11,270	7,879	8,570	5,927	8,605	6,976	7,912	6,985	7,094	6,049	174,503

TABLE B.—Causes of fatal accidents in and about the mines, and number attributable to each cause; number of wives made widows and children orphaned by reason of such accidents

Causes of Accidents In-	Districts																			Totals	Percentages for 1908	Percentages for 1907	Percentages for 1906	Percentages for 1905	Percentages for 1904	Percentages for 1903	
	First	Second	Third	Fourth	Fifth	Sixth	Seventh	Eighth	Ninth	Tenth	Eleventh	Twelfth	Thirteenth	Fourteenth	Fifteenth	Sixteenth	Seventeenth	Eighteenth	Nineteenth								Twentieth
Falls of coal, slate and roof, -----	16	22	19	16	14	19	20	21	18	17	19	13	12	5	10	13	3	11	10	6	284	47.65	46.42	46.93	53.54	47.98	49.30
Mine cars, -----	5	3	5	4	6	5	13	6	4	4	6	4	---	4	3	3	3	3	6	2	4	15.10	14.64	11.69	14.88	14.31	16.43
Explosions of gas and dust, -----				3	---	4	6	13	7	4	---	1	8	---	3	---	1	3	4	---	57	9.56	7.32	9.43	5.99	6.05	6.10
Explosions of powder and dynamite, -----	1	1	---	---	---	2	1	1	---	1	2	1	1	1	1	1	---	2	---	6	23	3.86	2.83	6.14	2.91	7.06	3.99
Premature blasts, -----	3	5	8	6	2	5	3	6	3	5	6	3	1	1	6	1	3	1	1	---	69	11.58	11.65	11.62	7.99	6.86	8.92
Falling into shafts, sloues, etc., -----	5	2	---	---	---	---	---	1	2	3	2	---	1	---	3	---	1	1	1	1	22	3.69	4.16	4.39	7.80	5.24	7.28
Crushed at batteries, Kicked by mules, etc., -----	---	---	---	---	---	---	---	---	---	1	---	---	---	---	---	1	---	---	---	---	4	.34	.33	.44	.65	.61	---
Suffocation by gas or otherwise, -----	---	---	---	---	---	---	---	---	---	---	---	---	2	---	---	1	---	1	---	---	4	.67	1.33	.66	.36	1.21	1.41
Machinery, -----	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1	---	---	---	---	4	.67	3.33	1.53	1.81	4.03	1.41
Electricity, -----	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1	.17	.33	.44	---	---	---
Miscellaneous, -----	1	---	---	2	---	1	---	---	---	---	---	---	---	1	---	---	---	2	---	---	39	6.34	5.0	3.73	4.17	6.65	5.16
Totals, -----	24	37	35	31	24	36	51	50	37	41	38	23	28	12	26	23	14	26	22	18	396	100.00	100.00	100.00	100.00	100.00	100.00
Causes of Accidents Outside	4	3	2	---	1	3	---	1	1	2	1	4	---	3	1	---	3	4	2	---	35	42.68	44.86	35.65	24.73	43.44	42.39
Cars, -----	3	1	2	---	3	1	1	2	2	3	1	1	2	1	1	1	3	---	1	---	20	35.37	27.10	22.77	35.48	15.15	27.18
Suffocation in chutes, etc., -----	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1	1.22	2.30	8.91	11.83	8.08	4.35
Roller explosions, -----	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1	1.22	.94	.99	2.02	2.02	2.17

TABLE C.—Causes of non-fatal accidents in and about the mines, and number attributable to each cause

	Districts														Totals	Percentages									
	First	Second	Third	Fourth	Fifth	Sixth	Seventh	Eighth	Ninth	Tenth	Eleventh	Twelfth	Thirteenth	Fourteenth			Fifteenth	Sixteenth	Seventeenth	Eighteenth	Nineteenth	Twentieth			
Causes of Accidents Inside																									
Falls of coal, slate and roof, -----	29	21	29	16	20	23	20	17	21	17	21	17	21	7	8	14	8	14	6	17	10	10	328	31.31	
Mine cars, -----	15	18	16	11	15	16	24	21	26	17	11	2	4	2	4	6	3	6	5	11	4	5	235	24.69	
Explosions of gas and dust, -----	2	2	2	1	1	14	4	21	17	3	4	13	10	12	10	2	10	9	8	10	9	8	130	13.60	
Explosions of powder and dynamite, -----	2	2	2	2	2	4	4	4	6	3	2	3	1	1	1	1	1	7	2	3	5	5	46	4.81	
Propanure blasts, -----	2	1	9	6	3	11	5	7	4	3	0	1	1	1	1	1	5	1	5	10	2	4	89	9.31	
Falling into shafts, slopes, etc., -----						1				3	1					1		1	1		5	4	11	1.15	
Crushed at batteries, -----	1	1	2	1	1	1	1	2	2	2	1								1		1	4	4	1.42	
Kicked by mules, etc., -----																			1			1	15	1.57	
Machinery, -----																			1			3	3	.31	
Electricity, -----																									
Miscellaneous, -----	9	5	2	8	2	5	8	4	12	5	3					6	5	3	2	5	7	1	2	94	9.83
Totals, -----	56	50	58	42	45	75	62	76	88	53	52	26	29	42	20	33	35	57	25	32	32	955	100.00		
Causes of Accidents Outside																									
Cars, -----	4	4	2	1	3	10	5	7	2	6	13					4	2	2	4	5	5	5	79	36.92	
Machinery, -----	3	4	4	1	3	1	3	1	1	5	1	3	4	1	1	1	1	1	1	4	4	3	88	17.76	
Boiler explosions, -----																							3	1.40	
Electricity, -----	4	2	5	4	4	4	9	7	8	5	12	1	5	6	3	2	3	2	3	8	1	5	94	43.92	
Miscellaneous, -----																									
Totals, -----	11	6	11	1	8	17	15	17	11	12	10	2	8	14	6	5	7	19	1	13	214	100.00			
Grand totals inside and outside, -----	67	56	69	43	53	92	77	93	99	65	62	28	37	56	26	38	42	76	26	45	1,170				

TABLE D.—Number of gaseous and non-gaseous mines, number of foremen, assistants and fire bosses, production of coal from gaseous and non-gaseous mines and washeries, and percentage of production from each

Districts	Number of gaseous mines	Number of foremen and assistant foremen in gaseous mines	Number of fire bosses	Number of non-gaseous mines	Number of foremen and assistant foremen in non-gaseous mines	Production in tons from gaseous mines	Production in tons from non-gaseous mines	Production in tons from washeries	Percentage of production from gaseous mines	Percentage of production from non-gaseous mines	Percentage of production from washeries
First,	1	2	1	50	47	87,566	3,100,585	101,878	2.53	91.91	5.53
Second,	18	31	35	17	18	3,104,774	1,692,197	31,711	64.27	35.08	.65
Third,	19	33	67	10	9	3,591,115	639,673	644,114	76.82	9.40	13.78
Fourth,	16	29	50	14	9	2,967,919	564,711	804,745	69.38	11.80	18.82
Fifth,	12	26	24	18	18	2,100,032	1,446,892	402,239	63.88	30.09	10.03
Sixth,	19	39	28	18	15	2,882,490	1,207,661	199,617	67.34	28.21	4.45
Seventh,	42	70	58	2	3	4,473,313	189,040	437,331	87.71	3.71	8.58
Eighth,	17	41	47	10	13	3,298,887	549,340	109,750	83.35	13.88	2.77
Ninth,	19	38	65	7	7	4,514,122	659,856	285,611	82.48	11.83	5.19
Tenth,	27	26	61	11	8	2,938,222	1,027,183	23,238	73.80	25.62	.58
Eleventh,	26	72	14	29	35	2,922,075	1,727,404	---	62.85	37.15	---
Twelfth,	14	83	5	1	1	2,924,311	6,580	---	99.78	22	---
Thirteenth,	26	82	16	2	2	2,820,138	107,988	365,907	85.61	3.28	11.11
Fourteenth,	14	45	8	12	18	1,738,097	787,452	---	68.82	31.18	---
Fifteenth,	14	38	26	35	35	1,722,296	1,337,935	---	56.28	48.72	---
Sixteenth,	18	37	35	20	20	1,492,531	856,379	38,465	62.04	36.33	1.63
Seventeenth,	16	26	50	21	13	3,192,731	564,495	72,062	83.38	14.71	1.88
Eighteenth,	23	30	33	14	14	1,892,980	972,439	---	64.96	35.04	---
Nineteenth,	28	46	32	16	17	1,892,141	738,319	---	130.396	68.54	4.72
Twentieth,	20	57	13	3	8	1,744,486	149,726	411,378	75.66	6.50	17.84
Totals and percentages,	380	874	658	295	306	52,306,196	18,146,768	4,139,217	70.12	24.33	5.55

Table E.—Quantity of coal produced by each company that produced 500,000 or more tons and the number of persons employed

Names of Companies	Numbers of Inspection Districts	Production of coal in tons	Employees
Philadelphia and Reading Coal and Iron Company, -----	Twelfth, Thirteenth, Fourteenth, Fifteenth, Sixteenth, Eighteenth, Nineteenth, Twentieth, -----	10,651,657	29,865
Delaware, Lackawanna and Western Railroad Company, -----	Second, Third, Fourth, Fifth, Eighth, Ninth, Tenth, -----	8,678,890	16,800
Delaware and Hudson Company, -----	First, Second, Third, Fourth, Sixth, Seventh, Ninth, -----	6,648,966	15,332
Lehigh Valley Coal Company, -----	Sixth, Seventh, Eighth, Eleventh, Twelfth, Thirteenth, Fourteenth, Fifteenth, Seventeenth, Twentieth, -----	5,882,808	13,327
Lehigh and Wilkes-Barre Coal Company, -----	Seventh, Ninth, Tenth, Eighteenth, -----	4,725,484	9,144
Pennsylvania Coal Company, -----	Second, Third, Fifth, Sixth, -----	4,614,458	9,799
Lehigh Coal and Navigation Company, -----	Seventeenth, -----	3,633,412	6,461
Susquehanna Coal Company, -----	Tenth, Thirteenth, Fifteenth, Sixteenth, -----	2,968,793	7,931
Seranton Coal Company, -----	First, Second, Third, Fourth, -----	2,488,215	6,617
Kingston Coal Company, -----	Eighth, Ninth, -----	1,996,300	3,246
Hillside Coal and Iron Company, -----	First, Fifth, Sixth, -----	1,374,871	3,501
Coxe Brothers and Company, Incorporated, -----	Eleventh, Seventeenth, Eighteenth, -----	1,221,275	2,001
G. B. Markle and Company, -----	Eleventh, -----	1,031,540	1,830
Temple Iron Company, -----	Eighth, -----	881,198	2,573
Summit Branch Mining Company, -----	Twentieth, -----	757,147	2,294
West End Coal Company, -----	Tenth, -----	722,197	1,169
Hudson Coal Company, -----	Fifth, Sixth, -----	711,425	2,131
Mill Creek Coal Company, -----	Eighteenth, -----	690,446	1,665
Price-Paucoast Coal Company, -----	Third, -----	652,564	1,408
Jermy and Company, -----	Fifth, -----	578,789	1,133
Sternick Creek Coal Company, -----	Second, -----	544,363	1,052
Mineral Railroad and Mining Company, -----	Sixteenth, -----	530,690	1,803
A. Pardee and Company, -----	Eleventh, -----	502,353	1,405
Totals, -----	-----	61,927,071	142,818

The 23 companies named in this table out of the 137 companies in the region produced 61,927,071 tons, or 83.02 per cent. of the total output of 74,562,181 tons.

TABLE F.—Classification of employes killed or fatally injured in and about the mines 1877—1908

	Years															
	1877	1878	1879	1880	1881	1882	1883	1884	1885	1886	1887	1888	1889	1890	1891	1892
Inside Employes																
Mine foremen and assistants, -----	1	2	2	3	5	3	2	1	3	2	1	1	4	1	3	
Fire bosses and assistants, -----	4	4	2	5	5	5	1	1	2	2	5	2	2	5	6	
Miners, -----	119	94	111	88	114	135	136	132	160	131	102	169	194	146	180	180
Miners, laborers, -----	32	28	37	38	70	56	67	81	86	68	57	87	79	95	119	111
Drivers and runners, -----	9	11	22	18	28	28	47	28	16	18	23	33	39	37	38	39
Doorboys, etc., -----	4	3	6	8	17	9	18	13	6	6	10	9	10	8	7	8
All others, -----	11	21	22	31	4	14	3	30	19	9	72	16	11	31	22	16
Totals, -----	176	163	232	186	234	250	274	286	290	236	270	317	339	323	372	361
Outside Employes																
Foremen, -----	1		2	2			7	4		1	3		1	1		
Blacksmiths and carpenters, -----							11	9	0	1	3		1	13	2	1
Engineers and firemen, -----				2	2	2	2	7	7	6	3	3	9	8	3	4
Slate pickers, -----	5	6	9	6	10	11	7	12	13	9	9	6	10	12	11	7
All others, -----	12	17	17	8	27	28	24	21	16	26	28	37	37	21	40	45
Totals, -----	18	24	30	16	39	41	49	46	42	43	46	47	58	55	56	57
Grand totals inside and outside, -----	194	187	262	202	273	291	323	332	332	279	316	364	397	378	428	418

TABLE F — Continued

	Years															
	1893	1894	1895	1896	1897	1898	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908
Inside Employees																
Mine foremen and assistants, -----	3	1	5	3	2	5	2	5	5	2	3	3	1	2	2	3
Fire bosses and assistants, -----	1	---	---	4	2	---	2	---	2	3	2	2	0	6	2	3
Miners, -----	195	179	204	210	176	176	199	184	224	114	202	233	308	226	309	313
Miners' laborers, -----	108	91	115	134	99	121	114	99	122	62	110	145	148	133	136	134
Drivers and runners, -----	47	38	33	46	26	33	39	33	45	27	46	31	31	32	46	49
Doorboys, etc., -----	12	5	7	10	4	6	18	8	6	5	12	20	11	9	18	18
All others, -----	22	15	14	29	28	12	15	33	37	32	51	63	47	48	88	55
Totals, -----	338	368	354	430	372	360	389	358	441	245	426	496	551	456	601	596
Outside Employees																
Foremen, -----	2	---	3	3	4	1	2	2	---	---	1	1	---	---	---	2
Blacksmiths and carpenters, -----	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	5
Engineers and firemen, -----	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1
Slate pickers, -----	---	4	4	4	2	4	6	2	5	7	6	3	6	3	8	4
All others, -----	11	12	13	12	6	13	10	9	9	12	9	11	24	14	16	14
Totals, -----	53	62	47	53	39	33	53	40	58	34	72	70	58	77	82	57
Grand totals inside and outside, -----	68	78	67	72	51	51	72	53	72	55	92	99	93	101	107	82
	456	446	421	502	423	411	461	411	513	300	518	595	644	557	708	678

TABLE G.—Number and causes of fatal accidents in and about the mines, 1870-1905

	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	1880	1881	1882	1883	1884	1885	1886	1887	1888
Inside																			
By falls of coal, -----	41	48	61	73	52	57	52	72	45	75	50	57	73	58	74	65	67	74	85
By falls of slate and roof, -----	19	16	38	31	41	37	40	44	32	53	44	56	53	66	61	62	61	75	89
By mine cars, -----	20	27	21	27	32	25	29	15	30	37	32	36	48	52	61	35	35	49	58
By explosions of gas, -----	17	28	30	27	27	19	29	16	21	29	22	36	24	32	19	25	24	19	20
By explosions of powder and dynamite, -----	15	6	4	2	5	10	14	3	6	11	3	3	12	11	5	13	7	7	11
By explosions of blasts, etc., -----	12	12	12	17	11	18	15	8	13	6	7	14	6	28	29	18	18	14	24
By falling into shafts, -----	13	3	10	11	5	12	4	1	1	1	1	5	8	14	11	11	5	9	9
By falling into slopes, -----	10	3	3	3	1	2	4	1	1	1	1	1	4	1	5	11	3	1	3
By falling down manways, etc., -----	2	2	2	2	2	2	2	3	2	3	2	1	1	1	2	1	1	1	1
Crushed at batteries, -----	2	2	4	3	1	1	1	2	2	6	1	1	1	1	2	1	1	1	1
By mules, -----	2	2	4	3	1	1	1	2	2	1	1	3	4	1	1	1	1	1	1
By suffocation, -----	2	24	2	9	5	4	4	1	4	1	1	4	5	1	1	1	1	1	1
By electricity, -----	35	17	17	21	29	20	19	11	6	7	11	14	15	13	19	50	16	22	18
Miscellaneous causes, -----	184	188	198	226	212	204	213	176	163	232	186	234	250	274	286	290	236	270	317
Totals, -----	4	4	9	17	4	6	6	5	7	14	2	16	18	24	16	19	12	17	16
By cars, -----	4	9	8	6	5	13	5	4	6	6	5	14	9	12	13	9	11	11	12
By machinery, -----	4	9	8	6	5	13	5	4	6	6	5	14	9	12	13	9	11	11	12
By suffocation, -----	1	2	1	1	1	2	1	2	1	1	1	3	2	4	3	7	5	1	1
By boiler explosions, -----	11	1	1	1	4	3	1	1	1	1	1	3	2	4	3	7	5	1	1
By electricity, -----	1	6	7	14	5	10	2	7	8	9	8	6	12	9	14	7	15	17	19
Miscellaneous causes, -----	27	22	25	38	19	34	15	18	24	30	16	39	41	49	46	42	43	46	47
Totals, -----	211	210	223	264	231	238	228	194	187	262	202	273	291	323	332	332	279	316	364
Grand totals inside and outside, -----																			

*Nanticoke disaster; 26 persons were entombed by an inrush of quicksand.

TABLE G —Continued

	1889	1890	1891	1892	1893	1894	1895	1896	1897	1898	1899
Inside											
By falls of coal, -----	81	67	75	88	80	83	66	68	84	58	78
By falls of slate and roof, -----	100	70	97	104	100	104	123	*187	120	128	148
By mine cars, -----	58	56	59	57	74	53	52	49	40	44	53
By explosions of gas, -----	29	60	39	57	45	29	31	41	36	33	23
By explosions of powder and dynamite, -----	10	3	13	7	11	18	21	9	10	11	11
By explosions of blasts, etc., -----	24	16	33	29	30	28	27	28	38	24	27
By falling into shafts, -----	3	17	11	6	7	13	7	13	8	7	5
By falling into slopes, -----	5	8	6	1	2	5	7	3	3	4	4
By falling down manways, etc., -----			1	7	4	1	4	8	5	4	7
Crushed at batteries, -----			2		1	1	3	2	1		2
By mules, -----			4		7	4	5	3	3	4	4
By suffocation, -----			17	2	1	4	3	6	1		8
By electricity, -----				1	17	26	3	9	20	16	5
Miscellaneous causes, -----	29	26	15	2	10	3	2	7	7	23	15
Totals, -----	339	323	372	361	388	368	354	430	372	360	339
Outside											
By cars, -----	27	25	12	19	14	23	26	18	21	15	26
By machinery, -----	14	9	14	11	13	13	15	17	9	14	12
By suffocation, -----				5	1	4	1	4	1	5	12
By boiler explosions, -----	6	7	2		2	10	4	9		2	
By electricity, -----											
Miscellaneous causes, -----	11	14	28	22	38	28	21	24	20	15	22
Totals, -----	58	65	56	57	68	78	67	72	51	51	72
Grand totals inside and outside, -----	397	378	428	418	456	446	421	502	423	411	461

*Twin shaft disaster; 53 persons entombed.

TABLE G —Continued

	1900	1901	1902	1903	1904	1905	1906	1907	1908	Totals	Percentages
Inside											
By falls of coal, -----	61	66	40	61	82	76	60	71	71	2,595	30.65
By falls of slate and roof, -----	114	160	76	149	156	210	154	208	213	3,648	39.03
By mine cars, -----	60	69	42	70	71	82	67	88	90	1,907	15.18
By explosions of gas, -----	38	33	20	26	30	33	43	41	57	1,216	9.68
By explosions of powder and dynamite, -----	14	15	19	17	35	16	28	17	23	459	3.65
By explosions of blasts, etc., -----	20	38	13	38	34	44	53	70	69	974	7.75
By falling into shafts, -----	13	19	6	19	14	24	11	16	13	367	2.53
By falling into slopes, -----	4	5	3	6	5	19	3	7	7	155	1.23
By falling down manways, etc., -----	2	4	4	6	7	7	6	2	9	96	0.77
Crushed at batteries, -----	1	1	2	6	3	3	2	2	2	42	0.33
By mules, -----	11	5	3	6	20	10	7	20	4	99	0.79
By suffocation, -----	11	5	3	6	20	10	7	20	4	263	2.09
By electricity, -----	12	30	17	22	33	23	19	3	1	4	0.03
Miscellaneous causes, -----	12	30	17	22	33	23	19	45	40	740	5.89
Totals, -----	358	441	245	426	496	551	456	601	596	12,565	100.00
Outside											
By cars, -----	28	19	19	39	43	23	36	48	35	732	85.53
By machinery, -----	10	12	16	25	15	33	23	20	20	495	24.03
By suffocation, -----	4	1	3	4	8	11	0	3	1	94	4.56
By boiler explosions, -----	1	1	1	2	2	1	1	1	1	63	4.61
By electricity, -----	11	39	17	22	31	23	32	24	15	641	31.15
Miscellaneous causes, -----	11	39	17	22	31	23	32	24	15	641	31.15
Totals, -----	53	72	55	92	99	93	101	107	82	2,060	100.00
Grand totals inside and outside, -----	411	513	300	518	695	644	557	708	678	14,625	

TABLE II.—Nationality of employes killed or fatally injured in and about the mines, 1892-1908

Nationality	1892	1893	1894	1895	1896	1897	1898	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908
American, -----	83	73	76	78	85	63	73	90	92	135	80	128	135	139	136	125	130
English, -----	33	36	37	18	33	31	21	27	27	22	14	17	23	18	9	14	21
Welsh, -----	40	41	43	39	38	38	47	30	23	24	15	30	26	27	27	30	22
Scott, -----	2	1	4	1	3	7	7	7	4	2	2	2	3	3	1	4	1
Irish, -----	63	75	76	73	67	77	58	67	43	48	28	50	38	38	17	45	35
German, -----	18	25	27	23	17	22	22	15	21	16	15	26	18	22	17	21	13
Polish, -----	96	120	91	113	132	107	111	132	104	139	64	125	166	175	160	205	213
Hungarian, -----	43	39	62	51	61	44	36	27	18	27	11	19	25	18	21	24	20
Italian, -----	14	19	16	18	11	12	8	13	24	25	12	33	35	37	41	63	49
Slovakian, -----	9	15	2	4	3	7	7	6	19	25	16	27	38	45	34	39	46
Lithuanian, -----	9	3	1	4	8	6	6	5	17	22	17	17	40	56	46	74	67
Austrian, -----	3	6	7	4	6	7	9	10	7	8	8	25	21	22	15	22	16
Russian, -----	3	1	2	1	7	2	12	14	4	7	12	13	23	33	25	31	35
Greek, -----	2	1	2	3	8	4	3	1	2	2	2	1	1	5	1	5	3
Swedish, -----	1	1	2	1	1	3	1	5	1	2	2	2	2	1	1	1	1
French, -----	1	1	1	1	1	1	1	1	1	2	1	2	1	5	5	2	2
Tyrolean, -----	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Bohemian, -----	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Assyrian, -----	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Canadian, -----	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Montenegrin, -----	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Totals, -----	418	456	446	421	502	423	415	461	411	513	300	518	505	644	537	708	678

Table I.—Production of coal in tons of 2,000 pounds, number of tons produced per employe inside, quantity of explosives used, and the number of tons of coal produced per each pound of explosive used, 1892-1908

Years	Total production of coal in tons of 2,000 pounds	Average number of tons of coal produced per employe inside	Number of pounds of black powder used	Number of pounds of dynamite used	Average number of tons of coal produced per pound of explosive used
1892, -----	51,226,977	624	30,981,875	1,002,190	1.59
1893, -----	52,811,110	611	31,723,771	1,324,142	1.60
1894, -----	50,966,920	588	30,755,450	1,713,235	1.57
1895, -----	56,948,756	638	32,766,775	1,797,494	1.65
1896, -----	53,843,249	548	32,117,950	1,733,910	1.59
1897, -----	52,581,036	549	31,801,950	2,415,650	1.51
1898, -----	52,892,594	519	30,670,100	3,025,015	1.57
1899, -----	60,512,331	656	34,317,275	3,649,417	1.59
1900, -----	57,333,396	609	30,929,500	3,464,641	1.67
1901, -----	67,094,665	682	33,920,100	4,155,655	1.59
1902, -----	41,340,635	*482	21,128,675	2,130,965	†1.77
1903, -----	75,232,585	†737	42,529,400	5,317,422	1.57
1904, -----	73,594,319	667	44,779,800	6,519,312	1.43
1905, -----	78,647,020	676	47,550,500	8,353,594	1.41
1906, -----	72,139,510	627	40,352,075	7,989,733	1.41
1907, -----	85,056,412	730	47,635,700	10,550,191	1.48
1908, -----	83,543,243	672	49,380,500	10,766,245	1.39

The ton of 2,000 pounds is used so that a comparison can be made with the bituminous production per pound of powder used.

*This decrease in production per employe inside was caused by the small number of days worked on account of the strike.

†The increase in production per pound of powder used was caused by the production of the washeries during the strike.

‡The increase in production per employe was due to the large production of the washeries.

Table J.—Number of employes in and about the mines, by counties, 1855-1908

Counties	1885	1886	1887	1888	1889	1890	1891	1892	1893	1894	1895	1896
Carbon,	2,627	3,255	3,076	4,563	3,487	3,409	3,312	3,848	4,410	5,391	4,352	4,333
Columbia,	1,826	2,163	1,944	2,687	1,886	2,503	2,797	2,435	2,663	2,624	2,627	2,781
Dauphin,	2,305	2,156	2,212	2,136	2,276	2,263	2,135	2,101	2,094	2,092	1,975	1,988
Lackawanna,	19,065	19,872	22,485	24,121	25,116	25,262	25,406	27,555	29,080	30,475	31,446	32,771
Luzerne,	40,600	41,499	42,719	41,641	45,221	43,314	45,880	48,369	51,395	53,097	55,885	56,965
Northumberland,	8,511	8,495	9,330	10,814	12,288	12,124	12,516	13,468	13,468	13,517	13,889	14,445
Schenykill,	24,136	25,214	24,132	25,682	28,596	30,221	30,243	31,894	33,607	31,781	32,124	35,295
Sullivan,	236	227	219	256	237	237	229	261	307	312	312	334
Susquehanna,	216	290	880	591	478	644	882	969	1,045	1,012	1,095	1,186
Wayne,	---	---	---	---	---	---	18	---	---	---	---	---
Totals,	100,320	103,044	106,517	112,218	110,664	110,919	123,308	130,300	138,069	139,989	143,705	150,088

Counties	1897	1898	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908
Carbon,	4,748	3,983	3,993	4,242	4,365	3,805	4,051	4,467	4,240	4,469	4,782	5,522
Columbia,	1,077	2,436	2,302	2,033	2,329	2,330	2,236	2,192	2,368	2,246	2,995	2,412
Dauphin,	2,072	2,174	2,190	2,577	2,353	1,915	2,140	2,113	2,167	2,233	2,124	2,204
Lackawanna,	33,892	32,422	30,886	32,811	34,798	35,333	37,470	40,675	40,859	41,429	42,742	42,418
Luzerne,	55,138	51,820	50,803	52,015	53,980	52,776	55,639	59,136	60,734	58,441	58,705	63,009
Northumberland,	14,583	13,833	14,697	15,105	14,187	14,863	14,580	14,345	15,298	14,730	15,700	15,581
Schenykill,	35,586	34,258	33,342	33,250	33,907	34,970	33,413	35,979	40,465	40,289	39,870	40,775
Sullivan,	327	321	465	434	321	752	648	665	719	634	719	875
Susquehanna,	1,234	1,193	1,210	1,250	1,409	1,386	1,367	1,392	1,307	1,320	1,275	1,302
Wayne,	---	---	466	11	589	---	253	366	370	384	463	225
Totals,	149,557	142,420	140,604	143,824	147,651	148,159	151,827	161,330	168,254	166,175	168,774	174,503

TABLE K.—Production of coal in tons, by counties, 1885-1908

Counties	1885	1886	1887	1888	1889	1890	1891	1892
Carbon, -----	688,098	1,164,970	869,026	1,592,865	1,227,908	1,226,541	1,191,158	1,427,543
Columbia, -----	612,580	601,731	740,315	712,821	515,019	599,404	761,359	889,490
Dauphin, -----	561,638	407,864	625,708	579,941	605,773	577,490	683,569	639,879
Lackawanna, -----	7,174,412	7,491,989	8,925,779	10,125,019	8,770,807	9,374,359	10,184,348	11,410,554
Luzerne, -----	14,787,379	14,616,101	15,009,747	17,270,224	15,931,395	15,825,674	17,726,590	17,518,508
Northumberland, -----	2,561,135	2,250,822	2,841,300	2,694,223	2,973,518	3,068,547	3,672,828	3,724,234
Schuylkill, -----	7,546,255	7,876,008	8,370,933	8,035,708	8,613,283	9,045,216	9,758,111	9,564,534
Sullivan, -----	119,012	61,767	92,679	81,680	71,390	63,746	74,884	76,069
Susquehanna, -----	81,459	97,071	176,421	213,595	261,827	315,350	369,713	457,622
Wayne, -----							3,450	
Totals, -----	34,133,583	31,777,618	37,644,018	41,628,426	38,973,950	40,166,327	44,376,180	45,738,373
Counties	1893	1894	1895	1896	1897	1898	1899	1900
Carbon, -----	1,510,280	1,589,395	1,577,146	1,488,550	1,327,235	1,445,288	1,630,565	1,663,961
Columbia, -----	741,991	510,537	493,042	443,330	481,433	569,175	865,961	875,643
Dauphin, -----	649,723	690,607	712,556	702,335	662,842	677,460	729,757	695,656
Lackawanna, -----	11,667,350	11,170,382	11,839,282	11,638,479	11,946,871	11,589,001	13,248,949	12,232,108
Luzerne, -----	18,233,145	17,243,918	19,143,101	17,964,900	17,141,899	17,793,773	19,809,742	19,179,573
Northumberland, -----	3,731,405	3,893,660	4,473,144	4,117,569	3,774,607	3,519,305	4,339,547	4,188,343
Schuylkill, -----	9,692,086	9,565,092	11,493,288	11,092,772	10,971,943	10,980,700	12,296,988	11,606,160
Sullivan, -----	70,418	132,141	152,141	131,798	164,946	147,533	163,555	209,022
Susquehanna, -----	571,956	413,578	890,904	474,637	470,488	422,369	624,492	496,432
Wayne, -----							279,955	19,520
Totals, -----	47,119,563	45,506,179	50,847,104	48,074,330	46,947,354	47,145,174	54,034,224	51,217,318

TABLE K — Continued

Counties	1901	1902	1903	1904	1905	1906	1907	1908
Carbon, -----	1,650,392	986,127	1,919,662	2,012,064	2,211,077	2,006,092	2,466,538	2,486,559
Columbia, -----	1,080,291	638,991	1,208,813	1,028,236	1,097,944	863,237	1,060,934	1,055,618
Dauphin, -----	741,382	377,983	654,437	645,906	615,648	654,003	741,034	755,147
Lackawanna, -----	15,469,040	10,381,401	17,898,333	16,971,096	17,597,468	16,821,929	20,029,850	19,314,581
Luzerne, -----	21,596,312	13,016,026	24,891,394	24,736,864	26,779,130	23,760,886	27,517,390	28,329,402
Northumberland, -----	4,849,099	2,825,273	4,927,394	4,925,578	4,895,697	4,769,408	5,071,243	5,417,626
Schuylkill, -----	13,640,766	7,668,306	14,633,487	14,440,320	16,049,250	14,621,903	18,000,866	16,247,066
Sullivan, -----	136,165	365,194	262,002	262,772	277,289	300,303	389,697	491,708
Susquehanna, -----	663,487	404,248	714,976	618,250	607,273	501,877	575,079	435,625
Wayne, -----	329,877	404,248	61,513	68,172	50,829	63,733	76,423	57,039
Totals, -----	59,905,951	36,911,549	67,171,951	65,709,238	70,220,554	64,410,277	76,836,082	74,592,181

TABLE L.—Fatal accidents for each 1,000 employes in and about the mines and tons of coal mined for each fatal accident, 1870-1908

Years	Employes	Fatal accidents	Fatal accidents for 1,000 employes	Number of tons of coal mined	Number of tons of coal mined for each fatal accident
1870,	35,600	211	5.93	12,653,575	59,970
1871,	37,488	210	5.60	13,808,087	66,039
1872,	44,745	223	4.98	13,809,976	62,332
1873,	48,199	264	5.48	18,751,358	71,028
1874,	53,402	231	4.33	17,794,857	77,034
1875,	69,966	238	3.40	20,865,220	87,795
1876,	70,474	228	3.24	20,929,166	86,013
1877,	66,842	194	2.90	22,077,879	113,803
1878,	63,964	187	2.92	18,661,577	99,795
1879,	68,847	262	3.81	27,711,250	105,768
1880,	73,373	202	2.75	24,977,261	123,650
1881,	76,031	273	3.59	30,537,998	111,861
1882,	82,200	291	3.54	31,301,277	107,565
1883,	91,421	323	3.53	33,705,098	104,344
1884,	101,073	332	3.28	32,561,373	98,076
1885,	100,320	332	3.31	34,135,583	102,818
1886,	103,044	279	2.71	34,777,618	124,651
1887,	106,517	316	2.97	37,644,018	119,127
1888,	122,218	334	2.98	41,628,426	114,391
1889,	119,964	397	3.32	38,973,900	98,171
1890,	119,919	378	3.15	40,166,227	101,260
1891,	123,308	428	3.47	44,376,180	103,683
1892,	130,300	418	3.21	45,738,373	109,422
1893,	138,069	456	3.39	47,119,563	103,464
1894,	139,929	446	3.19	45,506,179	102,032
1895,	143,705	421	2.93	50,847,101	120,777
1896,	150,688	502	3.34	48,974,330	95,776
1897,	149,537	423	2.83	46,947,354	110,987
1898,	142,420	411	2.89	47,154,174	114,708
1899,	140,604	461	3.28	51,034,224	117,211
1900,	143,824	411	2.86	51,217,318	124,616
1901,	147,651	513	3.47	59,505,951	116,775
1902,	148,139	309	2.03	36,911,549	123,038
1903,	151,827	518	3.41	67,171,951	129,675
1904,	161,339	595	3.69	65,709,258	110,436
1905,	168,254	644	3.83	79,220,551	109,032
1906,	166,175	557	3.35	64,410,277	115,638
1907,	168,774	708	4.20	76,836,082	108,526
1908,	174,503	678	3.88	74,592,181	110,018

Summary of the work of the Department of Mines

	1898	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908
Letters written, copied and indexed, -----	922	697	1,854	1,465	1,733	2,901	3,036	3,190	3,962	4,535	4,701
Letters received, docketed and filed, -----	1,216	972	1,342	1,690	1,954	2,328	2,649	3,023	3,218	2,915	3,852
Blanks sent to mine inspectors, -----	33,570	42,394	76,428	67,408	51,800	89,050	55,814	37,507	99,137	87,694	67,017
Letterheads and envelopes sent to mine inspectors, -----	7,200	26,188	26,750	23,200	21,750	93,000	30,000	61,000	58,350	68,244	88,515
Rules, general and special, sent to bituminous mine inspectors, -----	500	2,012	2,165	390	4,830	2,080	-----	960	2,190	2,915	50
Mine foremen's record books, 300 pages each, sent to bituminous mine inspectors, -----	275	279	400	30	618	173	37	178	160	355	79
Fire bosses' daily record books, 250 pages each, sent to bituminous mine inspectors, -----	50	-----	200	15	378	90	-----	30	40	112	82
Annual reports of the Department of Mines shipped from office, -----	522	1,830	1,735	2,303	1,937	4,052	8,115	5,933	14,298	5,312	14,141
Mine laws in English, pamphlet form, sent to mine inspectors, -----	-----	1,358	-----	-----	-----	11,250	40,500	75	14,215	110	245
Monthly narratives, 31 pages each, sent to mine inspectors, -----	-----	171	455	517	-----	475	525	400	553	555	500
Books for recording accidents, 400 pages each, sent to mine inspectors, -----	-----	18	17	17	-----	11	-----	1	6	3	2
Reports of accidents received, copied and filed, -----	-----	2,225	2,350	2,719	2,211	3,293	3,085	3,502	3,406	4,171	3,446
Reports of inspectors received, copied and filed, -----	-----	3,846	3,318	3,486	2,996	5,332	5,474	4,977	5,333	7,063	7,582
Daily reports of inspectors, showing duties performed and expenses incurred, copied and filed, -----	-----	5,416	5,027	6,024	6,213	9,360	9,360	11,040	11,544	12,727	12,913
Vouchers for incidental and other expenses compared and delivered to Auditor General, -----	-----	576	644	656	926	1,640	1,780	1,800	1,878	2,015	2,501
Anthracite mine laws translated into foreign languages and distributed, -----	-----	-----	-----	-----	57,250	22,335	61,700	-----	-----	-----	-----
Bituminous mine laws translated into foreign languages and distributed, -----	-----	-----	-----	-----	-----	57,000	29,500	-----	-----	-----	500
Books of mine foremen's and assistant mine foremen's certificates, 300 pages each, sent to mine inspectors, -----	-----	-----	-----	-----	-----	60	-----	-----	-----	-----	-----
Mine laws in English, pamphlet form, distributed, -----	-----	-----	-----	-----	-----	38,000	-----	378	14	632	4
Mine inspectors' annual reports received, corrected and compiled for publication, -----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Certificates of qualification issued to mine foremen and assistant mine foremen in the anthracite region, after being recorded, -----	18	18	18	20	20	30	30	30	37	40	40
Certificates of qualification issued to mine foremen of first grade and mine foremen of second grade in the bituminous region, after being recorded, -----	127	181	70	206	235	690	196	272	254	153	397
	-----	-----	-----	-----	-----	768	333	264	165	229	189

ANTHRACITE DISTRICTS



First District

LACKAWANNA, SUSQUEHANNA AND WAYNE COUNTIES

Carbondale, Pa., February 27, 1909.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor to transmit herewith my report as Inspector of Mines of the First Anthracite District for the year ending December 31, 1908.

Respectfully submitted,

P. J. MOORE, Inspector.

SUMMARY OF STATISTICS

Number of collieries,	25
Number of mines,	51
Number of mines in operation,	51
Number of tons of coal shipped to market,	3,110,073
Number of tons used at mines for steam and heat,	308,552
Number of tons sold to local trade and used by employes,	51,404
Number of tons produced,	3,470,029
Number of tons produced by compressed air machines, ..	.....
Number of tons produced by electrical machines, .....	.....
Number of persons employed inside of mines,	6,611
Number of persons employed outside,	2,229
Number of fatal accidents inside of mines,	24
Number of fatal accidents outside,	8
Number of non-fatal accidents inside of mines,	56
Number of non-fatal accidents outside,	11
Number of tons of coal produced per fatal accident inside,	144,585
Number of persons employed per fatal accident inside,..	275
Number of persons employed per fatal accident outside,..	279
Number of persons employed per non-fatal accident inside, ..	118
Number of persons employed per non-fatal accident outside, ..	203
Number of wives made widows,	17
Number of children orphaned,	31
Number of steam locomotives used inside of mines,	2
Number of steam locomotives used outside,	21
Number of compressed air locomotives used inside,	11
Number of electric motors used inside,	34
Number of fans in use,	32
Number of gaseous mines in operation,	1
Number of non-gaseous mines in operation,	50
Number of new mines opened,	2
Number of old mines abandoned,	3

TABLE A

PRODUCTION OF COAL

Names of Operators	Tons
Delaware and Hudson Company,	1,894,006
Hillside Coal and Iron Company,	735,663
Scranton Coal Company,	500,280
Northwest Coal Company,	157,863
Humbert Coal Company,	65,441
Morss Hill Coal Company,	58,934
Carbondale Coal Company,	22,221
Northeast Coal Company,	9,742
Clinton Falls Coal Company,	6,403
Spring Hill Coal Company,	5,467
Fall Brook Coal Company,	5,077
Archbald Coal Company,	3,929
Finn Coal Company,	2,110
West Mountain Coal Company,	1,981
Salem Hill Coal Company,	882
Total,	<u>3,470,029</u>

Production by Counties

Lackawanna,	2,977,345
Susquehanna,	435,625
Wayne,	57,059
Total,	<u>3,470,029</u>

TABLE B.—Fatal and non-fatal accidents inside and outside of mines; number of tons of coal produced per accident; number of persons employed; number employed per accident

Names of Operators	Fatal Accidents			Non-fatal Accidents			Tons of coal produced per fatal accident inside	Tons of coal produced per non-fatal accident inside	Number of employees inside	Number of employees outside	Total number of employees	Fatal accident			Non-fatal accident							
	Inside	Outside	Total	Inside	Outside	Total						Number of employees inside per fatal accident	Number of employees outside per fatal accident	Total	Number of employees inside per non-fatal accident	Number of employees outside per non-fatal accident	Total	Number of employees inside per fatal accident	Number of employees outside per fatal accident	Total	Number of employees inside per non-fatal accident	Number of employees outside per non-fatal accident
Delaware and Hudson Co.,	10	6	16	39	6	45	48,564	3,367	1,003	4,367	335	167	502	86	167	253	167					
Hillside Coal and Iron Co.,	3	1	4	8	4	12	91,458	1,461	501	1,964	487	504	991	182	504	686	126					
Seranton Coal Co.,	6		6	3		3	83,380	166,760	363	363	1,333	162	82	345	323	323						
Northwest Coal Co.,	4	1	5	2		2	39,406	73,632	82	82	432	87	82	175	82	257	52					
Humbert Coal Co.,				3	1	4	21,814	86	52	138	52	205	57	139	139							
Morris Hill Coal Co.,				1		1	58,034	139	65	23	88	34										
Arbald Coal Co.,								31	23	57	34											
Miscellaneous companies,								208	136	344												
Totals and averages for district,	24	8	32	56	11	67	61,965	6,611	2,229	8,840	275	279	554	118	279	392	203					

TABLE C.—Classification of Fatal Accidents Inside and Outside of Mines

	Months												Totals	Percentages	
	January	February	March	April	May	June	July	August	September	October	November	December			
Causes of Accidents Inside															
Falls of coal, -----						1			1					2	8.33
Falls of roof, -----	3	1	1		1			2		2		2		14	58.33
Mine cars, -----	1			2	1							1		5	20.84
Premature blasts, -----												2	1	3	12.50
Totals, -----	4	1	1	2	3			2	1	2		4	4	24	100.00
Causes of Accidents Outside															
Cars, -----	1	1			1		1							4	50.00
Machinery, -----	2			1										3	37.50
Miscellaneous, -----								1						1	12.50
Totals, -----	3	1		1	1		1	1						8	100.00
Grand totals inside and outside, -----	7	2	1	3	4		1	3	1	2		4	4	32	

TABLE D.—Classification of Non-fatal Accidents Inside and Outside of Mines

	Months												Totals	Percentages	
	January	February	March	April	May	June	July	August	September	October	November	December			
Causes of Accidents Inside															
Falls of coal, -----						1	1							2	3.57
Falls of slate, -----								2						2	3.57
Falls of roof, -----	2	1	6		2	1		3	2	2		4		25	44.64
Mine cars, -----	3	3		3	1	2		1			1	1		15	26.79
Premature blasts, -----								2						2	3.57
Mules, -----			1											1	1.79
Miscellaneous, -----	2	1		2				1	1	2				9	16.07
Totals, -----	7	5	7	5	3	4	1	5	6	3	5	5	5	70	100.00
Causes of Accidents Outside															
Cars, -----		2			1			1						4	36.37
Machinery, -----	1								2					3	27.27
Miscellaneous, -----	1		1									2		4	35.36
Totals, -----	2	2	1		1			1	2			2	11	100.00	
Grand totals inside and outside, -----	9	7	8	5	4	4	1	6	6	5	5	7	67		

TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Miners, -----	3		1		2			1			3	1	11
Miners' laborers, -----	1	1						1	1	2		2	8
Drivers and runners, -----				2	1								1
Company men, -----												1	4
Totals, -----	4	1	1	2	3			2	1	2	4	4	24
Outside													
Engineers and firemen, -----	1												1
Slatepickers (boys), -----								1					1
All other employes, -----	2	1		1	1		*1						6
Totals, -----	3	1		1	1		1	1					8
Grand totals inside and outside, --	7	2	1	3	4		1	3	1	2	4	4	32

*This man was killed outside while going home.

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Miners, -----	3		4		1	1		2	3	1	2	3	20
Miners' laborers, -----	2	1	2	2	1	2	1	2	1	2		1	17
Drivers and runners, -----	2	3	1	3					1				13
Doorboys and helpers, -----					1			1			1		3
Company men, -----		1							1				2
All other employes, -----						1							1
Totals, -----	7	5	7	5	3	4	1	5	6	3	5	5	56
Outside													
Foremen, -----		1											1
Blacksmiths and carpenters, -----	1												1
Slatepickers (boys), -----			1						1				2
All other employes, -----	1	1			1			1		1		2	7
Totals, -----	2	2	1		1			1		2		2	11
Grand totals inside and outside, --	9	7	8	5	4	4	1	6	6	5	5	7	67

TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
American, -----	1	1		2	2			1				1	8
English, -----	1										1		1
Irish, -----	1										1		2
Polish, -----	1				1			1	1				5
Italian, -----	1	1	1				1			1	1	2	8
Lithuanian, -----	1				1			1					3
Austrian, -----	1											1	2
Russian, -----	1			1						1			3
Totals, -----	7	2	1	3	4		1	3	1	2	4	4	32

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
American, -----	1	3	4		1	2		1	2	2	2	2	20
English, -----	1				1						1		3
Welsh, -----	1												1
Scotch, -----				1									1
Irish, -----	1									1	1	1	4
German, -----										1			1
Polish, -----	1	1	2	2				3			1	1	11
Italian, -----		1	1	2	1	1	1	3	1	1		2	14
Lithuanian, -----		1											1
Austrian, -----	1		1		1			1					4
Russian, -----	3	1				1							6
Greek, -----								1				1	1
Totals, -----	9	7	8	5	4	4	1	6	6	5	5	7	67

TABLE I.—Operators and mines, kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents, and number of persons employed inside

Names of Operators and Mines	Kind of opening	Gaseous or non-gaseous	Method of ventilation	Diameter of fan in feet	Width of blades in feet	Depth of blades in feet	Number of revolutions per minute	Water gauge developed—in inches	Name of fan	Power used	Number of splits of air currents	Number of cubic feet of air per minute entering the mine at inlet	Total quantity of air per minute circulating in all the splits in cubic feet	Number of cubic feet per minute passing out at outlet	Number of persons employed inside
Delaware and Hudson Co.															
Clinton Colliery:															
Clinton, North Klondike, ---	Tunnel, ---			16	3	3	112	.6			1	29,520	26,672	29,920	55
Clinton, South Klondike, ---	Tunnel, ---			10	3	3	112	.5	Galbal, ---		1	31,000	27,700	31,000	50
Clinton, River Side, ---	Slope, ---	Non-gas., ---	Fan, ---	20	5	6	75	1.4		Steam, ---	3	69,700	67,370	71,850	190
Clinton, Long Slope, ---	Slope, ---			17	4	5	110	1.6			4	69,850	67,800	72,500	218
Clinton, Grassy Vein, ---	Slope, ---			20	5	6	60	.9			2	54,800	52,400	56,500	132
Coal Brook Colliery:															
Coal Brook, No. 1, Grassy,*				20	5	6	84	1.2		Electricity,	2	33,420	29,200	39,000	110
Coal Brook, No. 2, Grassy,*				17	4	5	90	1.2		Electricity,	2	37,000	33,000	42,000	133
Coal Brook, No. 3, Grassy,*				17	4	5	90	1.2		Electricity,	1	24,000	22,000	27,000	60
Coal Brook, No. 3, Grassy,*				20	5	6	75	1.7		Electricity,	2	97,000	95,000	100,000	100
Coal Brook, Wilcox Creek,*				17	4	5	75	1.6	Galbal, ---	Steam, ---	2	55,000	52,000	57,000	68
Coal Brook, Wilcox Creek,*				21	5	6	75	1.7		Electricity,	3	75,000	70,000	75,000	185
Coal Brook, No. 1 Top Vein,*	Tunnel, ---	Non-gas., ---	Fan, ---	17	4	5	75	1.7		Electricity,	1	20,000	18,000	21,000	30
Coal Brook, No. 1 Pattens,*				20	5	6	75	1.7		Electricity,	1	18,000	15,000	20,000	31
Coal Brook, No. 2 Pattens,*				20	5	6	75	1.7		Steam, ---	1	21,000	20,000	20,000	50
Coal Brook, No. 3 Pattens, ---				12	3	4	80	1.0		Electricity,	1	9,000	7,500	10,500	30

*Same fan.

Carbondale No. 1 Colliery: Carbondale No. 1, Carbondale No. 1,	Tunnel, Slope,	Non-gas.,	{ Fan, Fan, Natural,	10 5	3 3.5	3 1.5	125 242	.8 .4	Guibal, Guibal,	Electricity, Electricity,	2 2 3	42,500 40,250 50,000	39,000 37,200 48,000	435,000 42,700 50,000	75 60 198
Powderly Colliery: Powderly, Powderly, Powderly,	Drift, Tunnel, Slope,	Non-gas.,	{ Natural, Natural, Fan,	17 4	5 5	64		.5	Guibal, Guibal,	Steam, Steam,	2 1 4	23,000 20,000 50,000	20,000 18,000 48,000	25,000 21,000 52,000	60 75 226
White Oak Colliery: White Oak No. 1, White Oak No. 6, White Oak No. 7,	Tunnel,	Non-gas.,	{ Fan, Furnace, Natural,	17	5	5	70	.8	Guibal, Guibal,	Steam, Steam,	4 1 2	110,000 10,500 38,000	98,000 9,500 20,000	125,000 12,400 40,000	390 40 89
Jermyn Colliery: Jermyn,	Shaft,	Non-gas.,	{ Fan, Fan,	20 17	5 5	0 6	78 75	1.5 .8	Guibal, Guibal,	Steam, Steam,	7 3	158,000 70,000	148,000 50,000	160,000 77,000	380 229
Illiside Coal and Iron Co. Clifford Colliery:	Shaft,	Non-gas.,	Fan,	18	5	5	100	1.0	Guibal,	Steam,	5	70,000	72,000	77,000	385
Forest City Colliery: Forest City No. 2,	Shaft,	Non-gas.,	Fan,	24	7	7	65	.7	Guibal,	Steam,	8	131,000	117,000	138,000	620
Erle Colliery: Erle,	Shaft,	Non-gas.,	{ Fans, Fan,	12 18	4 5	4 5	85 70	.6 .8	Guibal, Guibal,	Electricity, Steam,	3	92,000	85,000	97,000	281
Glenwood Colliery: Glenwood,	Shaft,	Non-gas.,	Fan,	18	5	5	70	.5	Guibal,	Steam,	4	53,000	49,000	62,000	174
Seranton Coal Co. Black Diamond Colliery: Black Diamond No. 1, Black Diamond No. 2, Black Diamond No. 3, Black Diamond No. 4,	Drift,	Non-gas.,	Fan,	12	4	4	130	.8	Guibal,	Steam,	1 1 1	25,000 22,000 20,000	20,000 18,000 16,000	26,000 20,400 21,000	60 68 60
Riverside Colliery: Riverside,	Shaft,	Gaseous,	Fan,	20	1	6	85	.5	Guibal,	Steam,	4	90,000	85,000	92,000	173
Raymond Colliery: Raymond, Raymond No. 2, Raymond No. 3,	Shaft, Slope, Slope,	Non-gas., Non-gas., Non-gas.,	{ Fan, Fan, Natural,	18 14	5 6	6 5	75 85	.75 1.0	Guibal, Guibal,	Steam, Steam,	2 2 1	78,000 45,000 9,000	75,000 40,000 8,000	82,000 60,000 10,000	310 170 30

*Abandoned.

TABLE I—Continued

Names of Operators and Mines	Kind of opening	Gasous or non-gasous	Method of ventilation	Diameter of fan in feet	Width of blades in feet	Depth of blades in feet	Number of revolutions per minute	Water gauge developed—in inches	Name of fan	Power used	Number of splits of air currents	Number of cubic feet of air per minute entering the mine at inlet	Total quantity of air per minute circulating in all the splits in cubic feet	Number of cubic feet per minute passing out at outlet	Number of persons employed inside
Raymond No. 4,	Slope,	Non-gas.	Fan,	10	3	3	80	.75	Guibal,	Steam,	2	52,000	48,000	57,000	52
Raymond, Japan,	Drift,	Non-gas.	Fan,†	10	3	3	80	.75	Guibal	Steam,	1	6,000	4,000	8,000	20
Raymond No. 5,	Drift,	Non-gas.	Natural,												
Raymond No. 1,*	Slope,	Non-gas.	Natural,												
Northwest Coal Co.															
Northwest Colliery:															
Northwest No. 1,	Slope,	Non-gas.	Fan,	16	4	5	80	1.5	Guibal,	Steam,	2	30,500	28,000	31,000	70
Northwest No. 2,*	Slope,	Non-gas.	Fan,	20	5	6	75	1.4	Guibal,	Electricity,	4	137,500	112,000	129,500	280
Morss Hill Coal Co.															
Morss Hill Nos. 1 and 2,	Slopes,	Non-gas.	Fan,	12	3	3	80	.7	Guibal,	Steam,	2	37,000	34,000	39,000	139
Humbert Coal Co.															
Sunnyside,	Drift,	Non-gas.	Natural,												
Carbondale Coal Co.															
Bolands,	Slope,	Non-gas.	Natural,												
Northeast Coal Co.															
Northeast,	Drift,	Non-gas.	Fan,	12	4	4	75	.3	Guibal,	Steam,	1	10,000	8,000	12,000	37

†Vented by fan at Raymond No. 4 mine

*Abandoned.

Clinton Falls Coal Co. Clinton Falls Nos. 1 and 2,	Drifts,-----	Non-gas,	Natural,	-----	-----	-----	-----	-----	-----	1	6,000	5,000	7,000	12
Spring Hill Coal Co. Spring Hill,	Drift,-----	Non-gas,	Natural,	-----	-----	-----	-----	-----	-----	1	6,500	5,400	7,500	16
Fall Brook Coal Co. Fall Brook or Murrins,	Drift,-----	Non-gas,	Natural,	-----	-----	-----	-----	-----	-----	1	3,500	2,500	3,700	7
Archbald Coal Co Tappans,	Slope,-----	Non-gas,	Natural,	-----	-----	-----	-----	-----	-----	1	6,900	5,000	7,000	34
Finn Coal Co. Finn,	Drift,-----	Non-gas,	Fan,-----	10	3	3	65	.1	Guibal,	-----	20,000	15,000	21,000	-----
West Mountain Coal Co. West Mountain,	Drift,-----	Non-gas,	Natural,	-----	-----	-----	-----	-----	-----	1	3,000	2,000	3,500	15
Salem Hill Coal Co. Bartons,	Drift,-----	Non-gas,	Natural,	-----	-----	-----	-----	-----	-----	1	5,000	4,000	6,000	24

TABLE 1.—Operators, location of collieries, railroads, etc.

Names of Operators and Collieries	County	Name of General Superintendent	Post Office	Name of Superintendent	Post Office	Railroad to Mine
Delaware and Hudson Co. Clinton, -----	Lackawanna and Wayne, -----					
Coal Brook, Carbondale No. 1, -----						
White Oak, -----						
Jermyn, -----	Lackawanna, ---	C. C. Rose, -----	Seranton, -----	E. R. Pettebone, ---	Dorranceston, -----	Delaware and Hudson
Jermyn Washery, Racket Brook Washery, -----						
Hillside Coal and Iron Co. Chiford, -----	Susquehanna, --					
Forest City, -----	Susquehanna, --	V. L. Peterson, -----	Seranton, -----	S. J. Jennings, ---	Forest City, -----	Erie
Erie, -----	Lackawanna, --					
Glenwood, -----	Lackawanna, --					
Seranton Coal Co. Black Diamond, Riverside, -----	Lackawanna, ---	W. L. Allen, -----	Peckville, -----	John Burkeler, ---	Olyphant, -----	N. Y. O and W.
Raymond, -----						
Northwest Coal Co. Northwest, -----	Lackawanna, ---	F. Hemelright, ---	Jermyn, -----	John White, -----	Carbondale -----	N. Y. O and W.
Humbert Coal Co. Sunnyside, -----	Lackawanna ---	T. V. Humbert, ---	Seranton, -----	W. S. Langstaff, ---	Jessup, -----	Erie
Morss Hill Coal Co. Morss Hill, -----	Lackawanna, ---	R. S. McMullin, ---	Carbondale, -----			Erie
Carbondale Coal Co. Bolands, -----	Lackawanna, ---	John J. Boland, ---	Carbondale -----			Delaware and Hudson
Northeast Coal Co Northeast, -----	Lackawanna, ---	J. H. Jordan, -----	Seranton, -----			N. Y. O and W.
Clinton Falls Coal Co. Clinton Falls, -----	Wayne, -----	John Koons -----	Moosic, -----			N. Y. O and W.

Spring Hill Coal Co. Spring Hill, -----	Lackawanna, ---	W. H. McCarty, ---	Carbondale, -----	Delaware and Hudson
Fall Brook Coal Co. Fall Brook or Murrins, -----	Lackawanna, ---	Frank Murrin, ---	Carbondale, -----	Local sales
Archbald Coal Co. Tappans, -----	Lackawanna, ---	O. N. Bianchard, ---	Binghamton, N. Y. ---	Delaware and Hudson
Finn, ----- Finn Coal Co.	Lackawanna, ---	W. M. Finn, -----	Seranton, -----	N. Y. O and W.
West Mountain Coal Co. West Mountain, -----	Lackawanna, ---	J. A. Komara, -----	Olyphant, -----	N. Y. O and W.
Salem Hill Coal Co. Bartons, -----	Lackawanna, ---	G. M. Gray, -----	Seranton, -----	Delaware and Hudson

TABLE 2.—Number of tons of coal mined, number of days worked number of persons employed, number killed and injured, quantity of powder and dynamite used, etc.

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Number of kegs of powder used	Number of pounds of dynamite used	Number of horses and mules
Clinton, Delaware and Hudson Co.	Lackawanna and Wayne,	311,657	28,976	2,538	343,171	237	807	4	7	16,336	61,341	87
Coal Brook, .....	.....	367,415	23,669	.....	391,084	207	1,186	3	11	15,485	9,179	76
Carbondale No. 1,* .....	.....	.....	.....	.....	.....	245	430	1	5	4,150	13,150	55
Powderly,	Lackawanna,	366,164	37,603	.....	403,767	239	512	2	5	2,486	9,031	52
White Oak, .....	.....	201,596	15,833	2,730	220,162	240	644	4	12	9,790	43,333	51
Jennyn, .....	.....	367,643	35,255	4,223	407,121	254	722	2	5	10,288	3,074	55
.....	.....	1,614,475	141,339	9,491	1,765,305	.....	4,301	16	45	58,535	139,068	376
Washeries: Jennyn, Racket Brook,	Lackawanna,	74,896	7,847	.....	74,896	.....	39	.....	.....	.....	.....	.....
.....	.....	45,953	.....	.....	53,805	.....	27	.....	.....	.....	.....	.....
.....	.....	120,854	7,847	.....	128,701	.....	66	.....	.....	.....	.....	.....
Totals, .....	.....	1,735,329	149,186	9,491	1,894,046	.....	4,367	16	45	58,535	139,068	376
Hillside Coal and Iron Co.	Susquehanna, Forest City, Erie, Glenwood,	590,999	24,341	5,196	390,530	212	518	2	3	7,111	29,452	38
.....	.....	968,952	10,932	5,179	115,889	30	734	1	3	12,005	21,179	52
.....	.....	121,81	50,025	1,857	143,693	234	307	4	4	5,983	40,372	31
.....	.....	67,932	25,234	.....	93,166	175	359	1	2	2,335	3,129	25
.....	.....	579,702	80,552	19,232	672,486	.....	1,951	4	12	27,432	94,432	149

*Coal prepared at Powderly.

Eric washery, -----	Lackawanna, -----	63,177	63,177	12,232	735,663	1,964	4	12	27,432	94,432	149
Totals, -----		612,879	80,552								
Black Diamond, -----	Scranton Coal Co.	72,899	3,500	690	77,099	251	1	9	6,607	90,600	23
Riverside, -----		67,055	20,075	436	87,066	240	1	1	3,363	10,325	29
Raymond, -----		303,849	30,000	1,716	335,615	842	4		13,600	50,000	69
Totals, -----		443,863	53,575	2,842	500,280	1,333	6	3	23,570	81,925	121
Northwest, -----	Northwest Coal Co.	145,435	11,694	731	157,863	432	5	2	8,440	12,154	55
Sunnyside, -----	Humbert Coal Co.	59,954	5,370	117	65,441	157		4	2,886	900	13
Morss Hill, -----	Morss Hill Coal Co.	43,709	3,000	12,225	58,934	293		1	3,325	13,725	18
Bolands, -----	Carbondale Coal Co.	13,559	1,825	6,837	22,221	287			625	1,625	9
Northeast, -----	Northeast Coal Co.	9,142	600		9,742	98			620		9
Clinton Falls, -----	Clinton Falls Coal Co.	5,963	160	280	6,403	120			250	10	2
Spring Hill, -----	Spring Hill Coal Co.	3,998	1,400	69	5,467	141			114	225	5
Fall Brook or Murrins, -----	Fall Brook Coal Co.		75	5,002	5,077	180			175		2
Tappans, -----	Archbald Coal Co.	3,079	600	250	3,929	54		1	90	462	26
Finn, -----	Finn Coal Co.	1,600	300	240	2,140	32			300	250	7
West Mountain, -----	West Mountain Coal Co.	943	125	913	1,981	133			325	350	3
Bartons, -----	Salem Hill Coal Co.	620	90	172	882	28			96	775	2
Grand totals, -----		3,110,073	308,552	51,404	3,470,029	8,840	32	67	126,783	346,211	797

TABLE 2.—Part 2

Names of Operators	County	Number of Boilers			Total horse power	Locomotives			Number of steam engines of all classes	Total horse power	Number of pumps delivering water to surface	Capacity in gallons per minute	Quantity delivered to surface per minute—gallons	Number of electric dynamos	Number of air compressors	
		Cylindrical	Horizontal	Vertical		Steam	Electric	Number of pumps delivering water to surface								
Delaware and Hudson Co., -----	Laekawanna and Wayne,	43	1,229	34	4,550	5,779	9	11	16	112	6,854	32	38,400	11,100	5	
Hillsid Coal and Iron Co., -----	Susquehanna and Laekawanna,	8	136	44	4,630	4,766	6	---	16	5 ¹	8,625	24	13,660	12,200	4	
Scranton Coal Co., -----	Laekawanna,	11	220	17	1,810	2,030	3	---	2	82	2,212	9	21,200	10,494	2	
Northwest Coal Co., -----	Laekawanna,			4	900	900	3	---	34	1,200	170	---	---	---	2	
Humbert Coal Co., -----	Laekawanna,			4	300	300	3	---	5	170	---	---	---	---	1	
Morse Hill Coal Co., -----	Laekawanna,			2	275	275	1	---	3	240	---	---	---	---	1	
Carbondale Coal Co., -----	Laekawanna,			2	160	160	1	---	3	110	---	---	---	---	1	
Northeast Coal Co., -----	Laekawanna,			2	250	250	1	---	0	185	---	---	---	---	1	
Clinton Falls Coal Co., -----	Laekawanna,	1	60	---	60	60	---	---	1	40	---	---	---	---	---	
Spring Hill Coal Co., -----	Laekawanna,			1	60	60	---	---	1	35	---	---	---	---	---	
Fall Brook Coal Co., -----	Laekawanna,			1	40	40	---	---	1	40	---	---	---	---	---	
Archbald Coal Co., -----	Laekawanna,			1	100	100	---	---	2	80	---	---	---	---	---	
Finch Coal Co., -----	Laekawanna,	1	85	---	75	75	---	---	3	180	---	1	150	150	---	
West Mountain Coal Co., -----	Laekawanna,			1	150	150	---	---	3	100	---	---	---	---	---	
Salem Hill Coal Co., -----	Laekawanna,			1	150	150	---	---	3	100	---	---	---	---	---	
Totals, -----		64	1,730	111	13,300	15,030	23	11	34	244	20,696	66	73,410	31,000	14	9

TABLE 3.—Number of employees inside and outside of mines

Names of Operators and Collieries	County	Inside											Outside							Grand total inside and outside				
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Dorbys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Foremen	Blacksmiths and carpenters	Engineers and firemen	State pickers (boys)	State pickers (men)	Bookkeepers and clerks		All other employes	Total outside		
Delaware and Hudson Co.	Lackawanna and Wayne, Lackawanna, Jermyu, Lackawanna,	1	3	---	198	258	97	33	4	38	13	645	---	1	6	19	17	40	1	78	103	807		
Clinton,		1	4	---	295	313	107	34	2	80	61	807	---	1	15	23	14	84	4	148	28	186		
Coal Brook,		1	2	---	94	120	52	2	4	40	6	393	---	1	6	12	6	3	3	6	67	9	430	
Carbondale No. 1,		1	1	---	111	153	54	5	2	20	3	361	---	1	4	13	28	35	2	60	3	69	312	
Powderly,		1	2	---	155	214	73	10	2	28	4	510	---	1	7	11	31	5	2	68	12	68	614	
White Oak,		1	2	---	203	297	91	25	2	63	15	609	---	1	7	12	13	30	2	46	2	68	722	
Jermyu,		6	14	---	1,056	1,304	476	109	16	278	105	3,364	---	1	42	80	114	107	13	476	22	927	3,801	
Washeries:		Lackawanna,	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Jermyu,			---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Racket Brook,		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Totals,	---	6	14	---	1,056	1,304	476	109	16	278	105	3,364	---	8	12	92	114	210	14	523	1,602	1,367		
Hillside Coal and Iron Co.	Susquehanna, Pumplinbush, Lackawanna, Lackawanna,	1	1	---	143	140	48	3	4	4	4	385	---	1	4	8	37	3	---	80	138	518		
Clifford,		3	2	---	298	227	42	3	6	35	74	690	---	1	15	21	37	3	---	83	161	784		
Forest City,		1	1	---	118	102	24	4	3	3	25	281	---	1	7	10	11	14	2	63	106	390		
Eric,		1	1	---	55	69	22	2	6	5	1	174	---	1	3	12	20	4	---	45	85	259		
Glenwood,	6	4	---	544	538	136	12	19	47	16	1,460	---	4	29	51	105	24	5	271	491	1,951			

Clinton Falls Coal Co.	1	8	1	2								12	1	1	1	4				6	13	25
Clinton Falls,	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Spring Hill Coal Co.	1	4	6	2	1	2						16	1	2	3	5	1			6	18	34
Spring Hill,	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Fall Brook Coal Co.	1	2	2	2								7				1					3	10
Fall Brook or Murrins,	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Archbald Coal Co.	1	12	12	3	2		3	1	1	2	2	34	1	1	2	8				1	8	57
Archbald,	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Finn Coal Co.	1	10	8	4	2	2	3					30	1	1	3	5	2			4	16	46
Finn,	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
West Mountain Coal Co.	1	5	6	2			1					15	1	1	1	2					7	22
West Mountain,	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Salem Hill Coal Co.	1	9	10	2			2					24	1	1	3	6				12	93	47
Salem Hill,	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Bartons,	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Grand Totals,	28	2,313	2,445	851	159	54	362	377	6,611	16	24	114	223	419	280	33	1,120	2,229	8,840			

TABLE 3.—Part 2

Names of Operators and Collieries	County	Number of Days Worked in Breaker												Total
		January	February	March	April	May	June	July	August	September	October	November	December	
Clinton, Delaware and Hudson Co.	Lackawanna and Wayne, ---	24	20	23	22	19	20	17	19	21	22	11	10	237
Coal Brook, ---	---	22	23	23	22	17	18	15	---	---	21	23	23	207
Carbondale No. 1, ---	---	19	18	22	22	18	20	18	20	20	23	22	23	245
Powderly, ---	Lackawanna, ---	24	23	22	20	17	16	17	17	19	19	22	23	239
White Oak, ---	---	22	24	24	24	19	18	20	20	18	11	22	21	240
Jermyu, ---	---	23	21	25	22	19	20	18	18	20	22	22	24	234
Hillside Coal and Iron Co.	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Clifford, ---	Susquehanna, ---	21	19	24	21	24	24	19	20	20	20	23	20	212
Forest City, * ---	Susquehanna, ---	22	21	---	---	---	---	---	---	---	4	23	20	90
Frie, ---	Lackawanna, ---	19	20	21	18	19	20	17	17	20	22	21	26	234
Genwood, ---	Lackawanna, ---	19	9	---	13	12	20	15	15	16	20	19	17	175
Seranton Coal Co.	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Black Diamond, ---	Lackawanna, ---	17	14	16	17	17	16	16	17	16	18	16	15	195
Riverside, ---	---	19	11	17	18	20	18	13	13	14	16	13	10	197
Raymond, ---	---	22	22	22	22	22	19	17	16	17	22	17	21	239
Sunnyside, ---	Lackawanna, ---	14	14	14	15	14	18	21	22	22	23	22	22	221
Northwest, ---	Northwest Coal Co.	---	---	---	---	---	---	---	---	---	---	---	---	---
Humbert Coal Co.	Lackawanna, ---	20	16	22	7	17	6	9	13	11	16	12	8	157
Morss Hill Coal Co.	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Morss Hill, ---	Lackawanna, ---	25	25	20	24	24	26	26	26	25	26	24	22	293

*Coal prepared at Clifford.

TABLE 4.—Fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Mine	County	Nature and Cause of Accident in Brief
Jan. 3	John Pristareh, -----	Austrian, --	Miner, -----	46	S.	---	---	Northwest, -----	Lackawanna, -	Fatally injured by fall of roof at face of chamber while barring out a shot.
6	Andrew Chuebran, ----	Russian, --	Driver, -----	18	S.	---	---	Glenwood, -----	Lackawanna, -	Fatally injured. His arm was caught between the top of the car and the roof and arm was badly lacerated. (The accident was not considered serious, and he walked home. He was then taken to the hospital where he died a few days later.
11	William Evans, -----	American, --	Engineer, ----	44	M.	1	---	Powderly, -----	Lackawanna, -	Fatally injured by breaker machinery. Outside.
18	Dominick Gloskoski, --	Polish, ----	Miner, -----	36	M.	1	---	Forest City, ----	Susquehanna, -	Fatally injured by a prop that was dislodged by a piece of falling roof. He was loading a car when the prop struck him and fractured his skull.
17	Peter Prokolo, -----	Italian, ----	Car loader, --	45	M.	1	---	Coal Brook, -----	Lackawanna, -	Fatally injured by a small pair of gear wheels while it is supposed he was oiling the machinery. Outside.
23	George McClosky, -----	Irish, -----	Laborer, -----	62	M.	1	---	Jermyn, -----	Lackawanna, -	Fatally injured. Struck by culm car under breaker while cleaning the track.
30	Wassel Zanovich, -----	Lithuanian, --	Miner, -----	43	S.	---	---	Clinton, -----	Lackawanna, -	Fatally injured by fall of roof at the face of his chamber when he returned from firing a shot.
Feb. 17	Joseph Cocolo, -----	Italian, ----	Laborer, -----	28	M.	1	---	Tappans, -----	Lackawanna, -	Fatally injured by fall of roof on heading road.
26	Philip Wallian, -----	American, --	Laborer, -----	21	S.	---	---	White Oak, -----	Lackawanna, -	Instantly killed by runaway car on culm plane. He was struck by the car at the foot of the plane. Outside.

Mar. 25	Lorenz Carmello, -----	Italian, ----	Miner, -----	27	M. 1	1	Black Diamond, --	Laekawanna, -	Fatally injured by fall of roof at face of chamber. He fired a blast that dislodged two props. He neglected to replace the props and while barring out the shot the roof fell on him.
April 8	George Goodrich, -----	American, --	Machinery Inspector,	26	M. 1	1	Clifford, -----	Susquehanna, -	Fatally injured by machinery in breaker. It is supposed that he was struck by a pulley wheel. There was no one present when the accident occurred. Outside.
24	Joseph Moseo, -----	Russian, ----	Barn-boss, ----	46	M. 1	1	Northwest, -----	Laekawanna, -	Fatally injured by trip of mine cars on slope. He stepped from one track to the other in front of the trip and was thrown under.
25	John Murnin, -----	American, --	Trip rider, ----	20	S. -----	-----	Clinton, -----	Laekawanna, -	Fatally injured by trip of empty cars on slope.
May 2	Joseph Skinkas, -----	Lithuanian, -	Miner, -----	32	S. -----	-----	Clinton, -----	Laekawanna, -	Fatally injured by fall of roof while shoveling coal near face of pillar where he was working.
11	Frank Moraski, -----	Polish, ----	Miner, -----	28	S. -----	-----	Carbondale No. 1, -	Laekawanna, -	Fatally injured by fall of four-teen inch coal while barring coal under it after he fired a shot.
28	William Gearhart, -----	American, --	Mach. helper, -	16	S. -----	-----	Coal Brook, -----	Laekawanna, -	Fatally injured by mine cars. He was riding on a trip of empty cars and in attempting to cross from one car to another he fell between them.
23	Walter Cannon, -----	American, --	Brakeman, --	15	S. -----	-----	Powderly, -----	Laekawanna, -	Fatally injured by mine locomotive. He was taking a trip of loaded cars from the mine to the breaker when in some unknown manner he fell under the locomotive. Outside.
July 1	Angelo Sloveckie, -----	Italian, ----	Miner, -----	9	S. -----	-----	White Oak, -----	Laekawanna, -	Fatally injured. Struck by mine locomotive while on his way home from work. Outside.
Aug. 7	Anthony Wasblesky, -----	Polish, ----	Miner, -----	4	M. 1	1	Northwest, -----	Laekawanna, -	Fatally injured by fall of roof while barring out a shot at face of chamber.
11	William Durst, -----	American, --	Laborer, ----	22	S. -----	-----	White Oak, -----	Laekawanna, -	Fatally injured by fall of roof. He was helping to take out pillars and had almost finished loading his car when the roof fell. The place was considered safe.
13	John Bilko, -----	Lithuanian, -	Slatepicker, -	14	S. -----	-----	Northwest, -----	Laekawanna, -	Fatally injured in breaker. A piece of the hopper broke off and fell on him.
Sept. 12	Konstanti Kresval, -----	Polish, ----	Laborer, ----	34	M. 1	4	Jermyn, -----	Laekawanna, -	Fatally injured by fall of coal near face of chamber while loading his car.
Oct. 22	Jacob Batuski, -----	Russian, ----	Laborer, ----	30	M. 1	2	Northwest, -----	Laekawanna, -	Fatally injured by fall of roof while preparing coal for a car at face of chamber.

TABLE 4 —Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Mine	County	Nature and Cause of Accident in Brief
Oct. 24	Phillip Pettett, -----	Italian, ----	Laborer, -----	25	M.	1	-----	Raymond, -----	Lackawanna, -	Fatally injured by fall of roof near face of working place. He was examining the roof when a piece of it fell on him.
Nov. 2	Daniel Farrell, -----	Irish, -----	Miner, -----	44	M.	1	2	Raymond, -----	Lackawanna, -	Fatally injured by fall of roof at face of workings when he returned after having fired a blast.
10	Santo Sidire, -----	Italian, ----	Laborer, -----	40	M.	1	3	White Oak, -----	Lackawanna, -	Fatally injured by a blast in a blind cross cut where he was seeking a place of safety from a blast in the chamber in which he was working.
18	William V. Seymour, --	English, ----	Miner, -----	49	M.	1	4	Raymond, -----	Lackawanna, -	Fatally injured by fall of roof while drilling a hole at face of workings.
25	Anthony Konetski, ----	Polish, ----	Miner, -----	53	M.	1	3	Raymond, -----	Lackawanna, -	Fatally injured in the back of head by a piece of coal about the size of a pea that struck him while running away from a shot. He continued his work and did not seem to mind the injury. Shortly after he went home he took a large drink of liquor and died in a few minutes.
Dec. 3	Berta Anthony, -----	Italian ----	Laborer, -----	48	F.	-----	-----	Riverside, -----	Lackawanna, -	Fatally injured. Body injured and leg fractured by a charge of powder that exploded in a hole that was being prepared for a blast. While the miner was tamping the hole he bent the needle so he took the tamping out and went back to the box. While he was gone Anthony ignited the powder. Died January 13, at State Hospital.

Dec. 19	Leo McAndrew, -----	American, --	Tail rope rider	18	S. ---	-----	Clinton, -----	Lackawanna, -	Fatally injured by mine car. He was standing near a pillar at a passing branch waiting for the tail rope trip to come down. The first car of the trip jumped the track at the fro and knocked him against the pillar.
26	Frank Fredericks, -----	Italian, ----	Laborer, -----	24	M. 1	-----	Coal Brook, -----	Lackawanna, -	Fatally injured by fall of roof while shoveling coal at face of workings.
31	Frank Krusnick, -----	Austrian, --	Miner, -----	32	S. ---	-----	Clifford, -----	Susquehanna, -	Fatally injured by fall of roof while preparing to stand a prop.

TABLE 5.—Non-fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Mine	County	Nature and Cause of Accident in Brief
Jan. 3	Michael Kuch, -----	Russian, ---	Oiler, -----	24	S.	Glenwood, -----	Lackawanna, ---	Leg fractured by machinery in breaker. While oiling machinery his foot was caught in gear wheel. Outside.
10	Frank Lahmanik, ---	Russian, ---	Driver, -----	23	S.	Jermyn, -----	Lackawanna, ---	Leg fractured. His foot turned while jumping into an empty car.
11	John Climsak, -----	Austrian, ---	Laborer, -----	19	S.	Black Diamond, ---	Lackawanna, ---	Spine fractured by fall of roof while shoveling coal near face of chamber.
13	Steven Solyak, -----	Russian, ---	Driver, -----	18	S.	Jermyn, -----	Lackawanna, ---	Body and shoulders injured by mine cars while assisting to replace them on the track.
17	George Martin, -----	English, ---	Miner, -----	55	M.	Glenwood, -----	Lackawanna, ---	Leg fractured by a "T" rail swinging from one side of the track while being pulled by a mule that he was following.
21	Patrick Carlin, -----	Irish, -----	Miner, -----	38	S.	White Oak, -----	Lackawanna, ---	Leg fractured by fall of roof while barring out a shot at face of chamber.
22	William Jones, -----	Welsh, ---	Miner, -----	39	M.	Erie, -----	Lackawanna, ---	Leg fractured by mine car that jumped off the track while he was following it. He was employed as a runner at the time.
23	Theophilus Davis, ---	American, ---	Carpenter, -----	45	M.	Carbondale No. 1, ---	Lackawanna, ---	Leg fractured. Fell off the roof of engine room he was building. Outside.
28	Paul Romanchuk, ---	Polish, ---	Laborer, -----	18	S.	Carbondale No. 1, ---	Lackawanna, ---	Back and kidneys injured. Squeezed between car and pillar. He was employed as driver at the time.
Feb. 1	Anthony Tewandoski, ---	Polish, ---	Driver, -----	18	S.	Clinton, -----	Lackawanna, ---	Arm fractured by mine cars. While trying to push one car he was bumped by another.
3	Peter Marley, -----	American, ---	Driver, -----	17	S.	Powderly, -----	Lackawanna, ---	Left foot badly squeezed by mine cars. He was riding between the cars when one of them jumped off the track and caught him.

Feb. 8	William Duteavage,---	Lithuanian,---	Laborer,---	42	S.	Erie,-----	Lackawanna,---	Head injured by fall of roof near face of chamber while shoveling coal.
10	Michael Barna,-----	Russian,---	Driver,-----	24	S.	Northwest,-----	Lackawanna,---	Body seriously injured by trip of ears that jumped on the track while going down the slope and bumped into a car behind which he was standing.
13	Joseph Barish,-----	Italian,---	Car loader,-----	33	M.	Erie,-----	Lackawanna,---	Body and hips injured. Squeezed between railroad cars under breaker. He was passing between the cars when another car bumped one of them. Outside.
20	Casper Wagner,-----	American,---	Motor engineer,---	22	S.	Coal Brook,-----	Lackawanna,---	Arm and face injured. While he was charging a motor the check valve blew out and struck him.
26	Herbert A. Frear,-----	American,---	Outside foreman,---	37	M.	White Oak,-----	Lackawanna,---	Hips fractured and body seriously injured. Struck by runaway culm car near foot of culm plane. Outside.
Mar. 4	James McAllister,-----	American,---	Miner,-----	37	M.	Powderly,-----	Lackawanna,---	Leg badly fractured by piece of rock sliding on him. Amputation was necessary.
9	Henry Nelson,-----	American,---	Miner,-----	27	S.	Clinton,-----	Lackawanna,---	Knee badly bruised by fall of roof while assisting a miner in another place to remove some rock.
10	James Toolan,-----	American,---	Slatepicker,-----	16	S.	Powderly,-----	Lackawanna,---	Wrist fractured. Fell from a beam while playing. Outside.
12	Joseph Grunder,-----	Austrian,---	Laborer,-----	39	M.	Clifford,-----	Susquehanna,---	Leg fractured by fall of roof while barring down coal at face of chamber.
23	Veladislaw Dromboski,-----	Polish,---	Miner,-----	32	S.	Sunnyside,-----	Lackawanna,---	Back injured by fall of rock in middle of vein while drilling a hole at face of chamber.
24	Frank Getna,-----	Italian,---	Miner,-----	39	S.	Coal Brook,-----	Lackawanna,---	Head and body injured by fall of roof near face of chamber.
28	Henry Waglow,-----	American,---	Laborer,-----	23	S.	White Oak,-----	Lackawanna,---	Hip and leg bruised by fall of roof near face of chamber.
28	Beonie Metosky,-----	Polish,---	Driver,-----	17	S.	Forest City,-----	Susquehanna,---	Arm fractured. Kicked by mule he was driving.
April 4	James McMyra,-----	Scotch,---	Laborer,-----	57	M.	Coal Brook,-----	Lackawanna,---	Back injured. A collar fell on him while helping to stand a set of timbers near face of chamber.
6	Stanley Boehenski,-----	Polish,---	Driver,-----	17	S.	Morss Hill,-----	Lackawanna,---	Leg fractured by mine car. He was riding on the front end and fell off.
16	Pawell Mrotska,-----	Polish,---	Driver,-----	17	S.	Jermyn,-----	Lackawanna,---	Leg fractured. Struck by empty mine car that was running from chain hoist.
21	Tony Shaumbrosky,-----	Italian,---	Runner,-----	19	S.	White Oak,-----	Lackawanna,---	Leg fractured by mine car that jumped off track while he was making up a trip.
22	Michael Leonard,-----	Italian,---	Laborer,-----	35	M.	Powderly,-----	Lackawanna,---	Arm and hip severely lacerated by percussion car, s that exploded while he was carrying them in his pocket.

TABLE 5 — Col. injured

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Mine	County	Nature and Cause of Accident in Brief
May 9	John J. Burns, -----	American, --	Doorboy, -----	16 S.	Married or single	Coal Brook, -----	Lackawanna, ---	Arm broken. Struck by trip of cars. He was stepping out of the way of a mine motor and did not notice the other trip coming.
9	James Mayers, -----	English, ----	Runner, -----	19 S.		Clyford, -----	Susquehanna, ---	Arm broken while coupling a locomotive to a trip of loaded mine cars. Outside.
23	John Suimachek, -----	Austrian, --	Laborer, -----	22 S.		Black Diamond, -----	Lackawanna, ---	Leg fractured by fall of roof near face of chamber while gathering tamping for a miner.
28	Frank Rapoche, -----	Italian, ----	Miner, -----	22 M		White Oak, -----	Lackawanna, ---	Head, face and body injured by fall of roof near face of chamber.
June 10	Joseph B. Valere, -----	Italian, ----	Miner, -----	52 M		Riverside, -----	Lackawanna, ---	Right arm fractured by fall of roof near face of chamber.
19	John Linda, -----	Russian, ---	Laborer, -----	28 S.		Northwest, -----	Lackawanna, ---	Hip dislocated. Struck by piece of coal that burst from pillar.
20	Thomas Hadgins, -----	American, --	Footman, -----	22 S.		Carbondale No. 1, --	Lackawanna, ---	Hip squeezed while uncoupling loaded cars near foot of slope.
25	John Pierce, -----	American, --	Laborer, -----	35 M		Carbondale No. 1, --	Lackawanna, ---	Leg fractured. Squeezed between empty cars.
July 24	Dominick Lagoteta, -----	Italian, ----	Laborer, -----	19 S.		White Oak, -----	Lackawanna, ---	Back and legs bruised by fall of top coal that projected over pillar and had not been propped.
Aug. 1	Nito Vinecill, -----	Italian, ----	Doorboy, -----	16 S.		Sunnyside, -----	Lackawanna, ---	Head injured. Struck by mine car.
6	James Kelley, -----	American, --	Brakeman, -----	17 S.		Clinton, -----	Lackawanna, ---	Fore and shoulder injured by mine cars while trying to jump on a loaded trip near head of slope. Outside.
6	Zhareyyi Bruno, -----	Italian, ----	Miner, -----	48 M		White Oak, -----	Lackawanna, ---	Thigh fractured by fall of slate from under top bench of coal that had been a combined eight feet.
6	Mouldo Catager, -----	Italian, ----	Laborer, -----	35 M.		White Oak, -----	Lackawanna, ---	Head, body and leg injured by fall of slate from under top bench of coal.

Aug. 12	Andrew Widovich, ---	Russian, ---	Laborer, ---	24	S.	White Oak, ---	Laekawanna, ---	Back injured by fall of roof. After firing a blast the miner allowed the laborer to go to the face before he examined it.
28	Frank Gurden, ---	Austrian, ---	Miner, ---	25	M.	Clinton, ---	Laekawanna, ---	Leg fractured. A piece of rock he had pulled down rolled on his leg.
Sept. 3	Alexander Sneski, ---	Polish, ---	Laborer, ---	23	S.	Jermyn, ---	Laekawanna, ---	Hip fractured by fall of roof while visiting another chamber.
11	James Holt, ---	American, ---	Runner, ---	24	S.	Carbondale No. 1, ---	Laekawanna, ---	Ribs fractured by bar. He was taking springs out of the wheels of a car when the bar slipped.
24	Frank Caracelo, ---	Italian, ---	Miner, ---	24	S.	White Oak, ---	Laekawanna, ---	Leg fractured by fall of roof near face of chamber.
25	Gnots Jukoski, ---	Polish, ---	Miner, ---	47	M.	Forest City, ---	Susquehanna, ---	Leg fractured by fall of roof while preparing to stand a prop near face of chamber.
30	William Sikorski, ---	Polish, ---	Viner, ---	31	M.	Clinton, ---	Laekawanna, ---	Face and hands burned by powder while preparing a blast.
30	John J. Connelly, ---	American, ---	Company man, ---	30	M.	Clinton, ---	Laekawanna, ---	Face and hands burned by powder while passing Sikorski.
Oct. 10	Alex Urupchak, ---	American, ---	Slatepicker, ---	15	S.	Powderly, ---	Laekawanna, ---	Two fingers cut off in cogs of engine while cleaning it. Outside.
13	John McDermott, ---	American, ---	Miner, ---	46	M.	Coal Brook, ---	Laekawanna, ---	Arm fractured. A piece of rock fell on him while he was barring down some roof at face of chamber.
17	Anthony Russo, ---	Italian, ---	Laborer, ---	25	S.	Sunnyside, ---	Laekawanna, ---	Hip fractured by fall of roof at face of chamber.
20	Justie Mosler, ---	German, ---	Jigtender, ---	16	S.	Clifford, ---	Susquehanna, ---	Arm fractured by revolving shaft in breaker while playing with a belt. Outside.
27	Patrick Lyons, ---	Irish, ---	Laborer, ---	25	S.	Coal Brook, ---	Laekawanna, ---	Arm fractured by piece of coal that fell off car he was loading.
Nov. 2	Leo Robinson, ---	American, ---	Driver, ---	18	S.	Coal Brook, ---	Laekawanna, ---	Ankle fractured by a door slamming against him.
7	Villiani Malay, ---	American, ---	Driver, ---	20	S.	Coal Brook, ---	Laekawanna, ---	Arm and leg fractured by fall of roof while he was waiting for laborer to finish loading car at face of chamber.
12	Joseph Kubash, ---	Polish, ---	Doorboy, ---	16	S.	Forest City, ---	Susquehanna, ---	Leg fractured by mine car. While walking along-side of trip he slipped and fell and the car struck him.
12	Thomas Ford, ---	Irish, ---	Miner, ---	48	M.	White Oak, ---	Laekawanna, ---	Hip dislocated. Fell at face of chamber.
18	Willis Nichols, ---	English, ---	Miner, ---	26	M.	Jermyn, ---	Laekawanna, ---	Hip fractured by fall of roof of chamber.
Dec. 3	Roma Jennett, ---	Italian, ---	Miner, ---	32	M.	White Oak, ---	Laekawanna, ---	Back injured by fall of roof near face of chamber. He was returning after firing a shot.
7	Edward Troy, ---	American, ---	Jigrunner, ---	30	M.	Sunnyside, ---	Laekawanna, ---	Received a compound fracture of leg. Fell on scaffold. Outside.
12	Peter Coggins, ---	Irish, ---	Laborer, ---	34	M.	Coal Brook, ---	Laekawanna, ---	Small bone in leg fractured by fall of roof near face of chamber while drilling a hole.

TABLE 5—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Mine	County	Nature and Cause of Accident in Brief
Dec. 16	Wineinty Labosky, ---	Polish, ---	Miner, ---	28	S.	Erie, -----	Lackawanna, ---	Leg fractured by fall of roof while he was barring it down.
19	Paul Dresco, -----	Greek, -----	Driver, -----	22	S.	Clinton, -----	Lackawanna, ---	Jaw fractured and head bruised. Knocked against door of mine car in which he was riding.
23	Samuel Harvey, -----	American, ---	Laborer, -----	25	M.	Coal Brook, -----	Lackawanna, ---	Arm fractured. Fell off a plank while oiling a revolving shaft in blacksmith shop. Outside.
28	Theodore Kroah, -----	Italian, ---	Miner, -----	48	M.	Coal Brook, -----	Lackawanna, ---	Leg fractured by fall of roof while replacing a timber that had been dislodged at face of chamber.

CONDITION OF COLLIERIES

DELAWARE AND HUDSON COMPANY

Clinton Colliery.—Ventilation and general condition good.

Coal Brook Colliery.—Ventilation and general condition good.

Carbondale No. 1 Colliery.—Ventilation and general condition good.

Powderly Colliery.—Ventilation and general condition good.

White Oak Colliery.—Ventilation and general condition good.

Jermyn Colliery.—Ventilation and general condition good.

HILLSIDE COAL AND IRON COMPANY

Clifford Colliery.—Ventilation fair; drainage good; condition as to safety good.

Forest City Colliery.—Ventilation in Clark vein good, but in Dunmore vein it was bad in many places. Condition as to safety good.

Erie Colliery.—Ventilation and drainage bad; condition as to safety fair.

Glenwood Colliery.—Ventilation and drainage bad; condition as to safety fair.

SCRANTON COAL COMPANY

Black Diamond Colliery.—Ventilation and drainage fair; condition as to safety good.

Riverside Colliery.—Ventilation, drainage and condition as to safety fair.

Raymond Colliery. Ventilation and general condition good.

NORTHWEST COAL COMPANY

Northwest Colliery.—Ventilation and general condition good.

HUMBERT COAL COMPANY

Sunnyside Colliery.—Ventilation bad; drainage and condition as to safety good.

MORSS HILL COAL COMPANY

Morss Hill Colliery.—Ventilation bad; general condition fair.

CARBONDALE COAL COMPANY

Bolands Colliery.—Ventilation bad; general condition fair.

NORTHEAST COAL COMPANY

Northeast Colliery.—Ventilation bad; general condition fair.

CLINTON FALLS COAL COMPANY

Clinton Falls Colliery.—Ventilation and general condition fair.

SPRING HILL COAL COMPANY

Spring Hill Colliery.—Ventilation good; general condition fair.

FALL BROOK COAL COMPANY

Fall Brook or Murrins Colliery.—Ventilation and general condition fair.

ARCHBALD COAL COMPANY

Tappans Colliery.—Ventilation and general condition fair.

FINN COAL COMPANY

Finn Colliery.—Ventilation and general condition bad.

WEST MOUNTAIN COAL COMPANY

West Mountain Colliery.—Ventilation bad; general condition fair.

SALEM HILL COAL COMPANY

Bartons Colliery.—Ventilation and general condition fair.

 IMPROVEMENTS

DELAWARE AND HUDSON COMPANY

Clinton Colliery.—Water course completed connecting with No. 2 shaft of the Hillside Coal and Iron Company. One twelve-inch bore hole drilled 210 feet for pumping purposes. Pumping plant is installed in North side, River Slope. No. 4 plane extended 100 feet and completed. Breaker repairs consist of 12 emery pickers, new 27 inch by 36 inch rolls, and 2 new scales for weighing railroad cars.

Coal Brook Colliery.—New drift at Wilson Creek, 400 feet in length, driven to take the place of the old drift, which will be used as a water course in the future. Coal Brook and Clinton mine water course driven 1,100 feet and completed. Breaker repairs consist of steel conveyor, 350 feet long, 16 emery pickers, 8 spiral pickers and 2 lump coal shakers. Electric power house extended 12 feet by 54 feet (extension built of brick). One electric generator, 540 K. W., driven by a Compound Duplex Hamilton Corliss engine, 20 x 36 x 42 inches, has been installed.

Carbondale No. 1 Colliery.—New rope haulage 3,050 feet long, and a fan shaft, 10 feet x 10 feet in area and 50 feet in depth, completed; a Buffalo 5-foot fan, driven by a 10 H. P. electric motor, for ventilating new tunnel, installed; Rock plane from bottom to top vein driven 70 feet.

Powderly Colliery.—Two 8 inch bore holes 60 feet deep drilled; 6 inch slush line laid, 4,000 feet long, preparatory to filling workings

under the Lackawanna River to avoid dangers from flooding; a 30 inch pump hole, 130 feet deep drilled; a centrifugal slush pump, 36 inches in diameter, driven by single engine, 8 x 10 inches, installed.

Jermyn Colliery.—Brick boiler house addition, 54 x 70 feet, containing 4 Wickes boilers, 300 H. P. each, in course of construction; two 24 inch bore holes, 235 feet deep, drilled for pumping water to surface; two Scranton Compound Duplex pumps, 19 x 36 x 21 x 36 inches, capacity 5,000 gallons a minute, installed; new plane from Archbald vein to Grassy vein driven 350 feet; one six and one-half-ton motor with reels installed; an 8 inch bore hole, 120 feet deep, drilled for slushing purposes.

White Oak Colliery.—Two 10 inch bore holes drilled for exhaust steam and discharge from slope pump; one 19 inch bore hole drilled for pumping water to surface; one Scranton Plunger pump, 20 x 10 x 36 inches, capacity 800 gallons a minute, installed; one Allison Plunger pump, 20 x 10 x 24 inches, capacity 600 gallons a minute, installed.

HILLSIDE COAL AND IRON COMPANY

Forest City Colliery.—The old Forest City breaker washery was torn down and a new one, 68 feet wide, 100 feet 6 inches long and 130 feet 7 inches high, erected. The lower portion of this washery up to the machinery line, including the pockets, is of reinforced concrete. All mud coal, including chestnut, and all small sizes from buckwheat down, are prepared there, and ten double-compartment jigs are used in separating the impurities from the coal. Two additional boilers, 125 H. P., locomotive type, have been added to the Forest City breaker boiler room, and the water tunnel connecting the Clark vein workings at No. 2 shaft was completed by the Delaware and Hudson Company and connection made, which will drain the entire workings above that level. Clifford breaker was abandoned the latter part of the year and all the coal, including that from Clifford shaft, is now being prepared through the Forest City breaker and washery. A new Compound Duplex Plunger pump, 18 x 28 x 10 x 35 inches, has been installed in the dip workings in Clifford shaft to deliver water to the surface or to the new washery, as needed.

ARCHBALD COAL COMPANY

Tappans Colliery.—The coal from this colliery heretofore was delivered into the Delaware and Hudson railroad cars on a siding at Archbald, after being hauled in wagons a distance of one and a quarter miles. To eliminate this expense a new track has been laid, 6,600 feet in length, with 40 pound T iron rails, from the breaker to the top of an incline plane. A new incline has been built, 1,750 feet in length, with 40 pound iron; new coal pockets have been built at bottom of new plane where coal is dumped from special cars, built for the use of the colliery, and taken to and from the breaker by a new twenty-ton locomotive. A branch of the Delaware and Hudson Railroad is built from the main line nearly midway between Archbald and Winton to the new coal pockets. This is a decided improvement and reduces the cost of transportation from the colliery to the railroad, and will also be the means of increasing the output of the colliery. The old Pierce Coal Company's shaft has been reopened

down to the Clark vein; the old timbers have been removed and concrete put in. A new tower is in course of construction over the shaft, and an new pair of hoisting engines, when finished, will continue the shaft from the Clark to the Dunmore vein. New elevators and conveyors have been put in the breaker: a slope has been sunk on the New County vein, a distance of 800 feet; 1,200 feet of 5-inch pipe line for steam purposes and 800 feet of 6-inch pipe line for water purposes have been laid.

Second District

LACKAWANNA COUNTY

Scranton, Pa., February 18, 1909.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor of transmitting herewith my annual report of the Second Anthracite District for the year ending December 31, 1908.

Respectfully submitted,

L. M. EVANS, Inspector.

SUMMARY OF STATISTICS

Number of collieries,	14
Number of mines,	35
Number of mines in operation,	35
Number of tons of coal shipped to market,	4,376,100
Number of tons used at mines for steam and heat,	406,009
Number of tons sold to local trade and used by employes, .	42,412
Number of tons produced,	4,824,542
Number of tons produced by compressed air machines, ..	—
Number of tons produced by electrical machines,	—
Number of persons employed inside of mines,	8,309
Number of persons employed outside,	2,608
Number of fatal accidents inside of mines,	37
Number of fatal accidents outside,	7
Number of non-fatal accidents inside of mines,	50
Number of non-fatal accidents outside,	6
Number of tons of coal produced per fatal accident inside,	130,393
Number of persons employed per fatal accident inside, ..	224
Number of persons employed per fatal accident outside,	372
Number of persons employed per non-fatal accident inside,	166
Number of persons employed per non-fatal accident out- side,	434
Number of wives made widows,	27
Number of children orphaned,	55
Number of steam locomotives used inside of mines,	4
Number of steam locomotives used outside,	34
Number of compressed air locomotives used inside,	8
Number of electric motors used inside,	30
Number of fans in use,	31
Number of gaseous mines in operation,	18
Number of non-gaseous mines in operation,	17

TABLE A

PRODUCTION OF COAL

Names of Operators	Tons
Scranton Coal Company,	1,045,389
Delaware and Hudson Company,	872,312
Delaware, Lackawanna and Western Railroad Company, .	778,767
Pennsylvania Coal Company,	692,618
Sterrick Creek Coal Company,	544,363
Lackawanna Coal Company,	394,951
Dolph Coal Company,	209,784
Mount Jessup Coal Company,	147,636
Moosic Mountain Coal Company,	127,311
Blakely Coal Company,	11,381
Total,	<u>4,824,542</u>
Production by Counties	
Lackawanna,	<u>4,824,542</u>

TABLE B.—Fatal and non-fatal accidents inside and outside of mines; number of tons of coal produced per accident; number of persons employed; number employed per accident

Names of Operators	Fatal Accidents			Non-fatal Accidents			Tons of coal produced per fatal accident inside	Tons of coal produced per non-fatal accident inside	Number of employees inside	Number of employees outside	Total number of employees	Number of employees inside per fatal accident	Number of employees outside per fatal accident	Number of employees inside per non-fatal accident	Number of employees outside per non-fatal accident	
	Fatal Accidents		Non-fatal Accidents		Total											
	Inside	Outside	Inside	Outside	Inside	Outside										Total
Seranton Coal Co.,	8	5	10	5	5	6	130,673	269,077	2,047	824	2,871	255	412	409	824	
Delaware and Hudson Co.,	4	1	5	8	8	10	218,085	169,013	1,516	486	1,952	379	436	189	21	
Railroad, Lackawanna and Western																
Pennsylvania Coal Co.,	6	2	8	14	14	14	129,794	55,626	1,280	255	1,505	213	112	91	112	
Starrick Creek Coal Co.,	5	1	6	6	6	7	115,436	115,436	982	215	1,197	163	215	163	215	
Lackawanna Coal Co.,	5	1	6	9	9	9	108,872	108,872	798	254	1,052	159	215	159	254	
Dolph Coal Co.,	1	1	2	1	1	1	78,990	43,883	797	227	1,024	159	227	88	88	
Mount Jessup Coal Co.,	1	1	2	1	1	1	269,784	269,784	319	219	588	319	319	319	319	
Moosic Mountain Coal Co.,	1	1	2	2	2	2	147,636	271	271	155	426	271	271	155	155	
Miscellaneous companies,	1	1	2	2	2	2	127,311	63,655	279	40	319	279	130	130	130	
Totals and averages for district,	37	7	44	50	6	56	130,393	96,490	8,909	2,608	10,917	224	372	166	421	

TABLE C.—Classification of Fatal Accidents Inside and Outside of Mines

	Months												Percentages	
	January	February	March	April	May	June	July	August	September	October	November	December		Totals
Causes of Accidents Inside														
Falls of coal,	1												2	5.41
Falls of roof,	2	4		1	3		1	4	1		3	1	20	54.07
Mine cars,				1	1				1				3	8.11
Explosions of powder and dynamite,	1												1	2.71
Premature blasts,							1	1			1	2	5	13.51
Falling into shafts,	2				1			1			1		5	13.51
Miscellaneous,			1										1	2.70
Totals,	6	4	1	2	5		2	6	2		5	4	37	100.00
Causes of Accidents Outside														
Cars,		1									2		3	42.86
Machinery,						1							1	14.28
Boiler explosions,			1										1	14.28
Miscellaneous,						1						1	2	28.58
Totals,		1	1			2					2	1	7	100.00
Grand totals inside and outside, ..	6	5	2	2	5	2	2	6	2		7	5	44	

TABLE D.—Classification of Non-fatal Accidents Inside and Outside of Mines

	Months												Percentages	
	January	February	March	April	May	June	July	August	September	October	November	December		Totals
Causes of Accidents Inside														
Falls of coal,	1	1									1		1	2.00
Falls of roof,	2	3	3	1	1	1	2	4	1	4	1		20	40.00
Mine cars,	1	3	2	2		3	1	1	1	1		1	13	36.00
Explosions of gas and dust,		1						1					2	4.00
Explosions of powder and dynamite,	1						1						2	4.00
Premature blasts,		1											1	2.00
Mules,						1							1	2.00
Miscellaneous,	1			2						1		1	5	10.00
Totals,	5	6	5	5	1	5	4	5	3	6	3	2	50	100.00
Causes of Accidents Outside														
Cars,	1		1				1	1					4	66.66
Miscellaneous,	1						1						2	33.34
Totals,	2		1				2	1					6	100.00
Grand totals inside and outside, ..	7	6	6	5	1	5	6	6	3	6	3	2	56	

TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
Inside													
Miners, -----	3	4		1	1		2	2	2		1	2	18
Miners' laborers, -----	2			1	3						1	2	11
Drivers and runners, -----					1			2			2		5
Company men, -----											1		1
All other employes, -----	1		1										2
Totals, -----	6	4	1	2	5		2	6	2		5	4	37
Outside													
Foremen, -----											1		1
Engineers and firemen, -----			1										1
Slatepickers (boys), -----						1							1
All other employes, -----		1				1					1	1	4
Totals, -----		1	1			2					2	1	7
Grand totals inside and outside, ..	6	5	2	2	5	2	2	6	2		7	5	44

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
Inside													
Fire bosses and assistants, -----									1				1
Miners, -----	3	1	3	2		1	1	3		3			19
Miners' laborers, -----	1	2	1		1	1	2	1	1	2	2		12
Drivers and runners, -----	1	2	1	2		2	1			1		1	11
Doorboys and helpers, -----				1							1		2
All other employes, -----		1				1		1	1			1	5
Totals, -----	5	6	5	5	1	5	4	5	3	6	3	2	50
Outside													
Slatepickers (boys), -----							1						1
All other employes, -----	2		1				1	1					5
Totals, -----	2		1				2	1					6
Grand totals inside and outside, ..	7	6	6	5	1	5	6	6	3	6	3	2	56

TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
American, -----	2		1			1					2		5
English, -----			1								1		3
Welsh, -----									1				1
German, -----											1		1
Polish, -----		1		1	3		2	5			1	4	17
Italian, -----	2	1		1							1		6
Slavonian, -----	1	2			1	1			1			1	7
Lithuanian, -----	1	1											2
Russian, -----					1						1		2
Totals, -----	6	5	2	2	5	2	2	6	2		7	5	44

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
American, -----	1	2				2		2	1	1	1	1	11
English, -----			1	1									3
Welsh, -----			1	1					1				3
Irish, -----		1		1				1		1			4
Polish, -----	2	1	3	1	1	2	1			1	1		13
Hungarian, -----	1												2
Italian, -----	1		1				1	2	1				6
Slavonian, -----	1	2		1			1			2	1		8
Austrian, -----	1												1
Russian, -----						1	3	1				1	6
Totals, -----	7	6	6	5	1	5	6	6	3	6	3	2	56

TABLE I.—Operators and mines, kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents, and number of persons employed inside

Names of Operators and Mines	Kind of opening	Gaseous or non-gaseous	Method of ventilation	Diameter of fan in feet	Width of blades in feet	Depth of blades in feet	Number of revolutions per minute	Water gauge developed in inches	Name of fan	Power used	Number of splits of air currents	Number of cubic feet of air per minute entering the mine at inlet	Total quantity of air per minute circulating in all the splits in cubic feet	Number of cubic feet per minute passing out at outlet	Number of persons employed inside
Scranton Coal Co.															
Johnson No. 1,	Shaft,	Gaseous,	Fan,	30	10.00	8.00	55	2.00	{Guibal,	Steam,	10	223,620	175,078	229,062	319
Johnson No. 2,	Slope,	Gaseous,	Fan,	18	5.00	6.00	112	1.60	{Guibal,	Steam,	6	117,425	84,475	130,300	240
Johnson No 2 plane,	Slope,	Gaseous,	Fan,	10	2.50	3.25	130	.60	{Guibal,	Electricity,	2	40,000	31,325	44,650	110
Ontario Colliery:															
Sturgess,	Shaft,	Non-gas.	Fan,	20	6.00	6.25	65	1.20	{Guibal,	Steam,	4	65,680	60,685	73,050	234
Tunnel,	Tunnel,	Gaseous,	Fan,	14	4.25	3.50	90	1.00	{Guibal,	Steam,	3	77,800	70,000	82,000	140
Blondyke,	Tunnel,	Non-gas.	Fan,	12	3.25	3.60	110	1.0	{Guibal,	Steam,	2	114,700	101,000	118,700	200
Blue Ridge,	Tunnel,	Non-gas.	Natural,									15,000	25,000	43	
Blue Ridge,	Shaft,	Non-gas.	Fan,	15	4.50	4.00	75	.50	{Guibal,	Steam,	1	36,000	21,000	42,500	74
Riehmound No. 3 Colliery,	Shaft,	Gaseous,	Fan,	30	10.00	10.00	45	1.30	{Guibal,	Steam,	6	108,500	92,800	120,500	206
Delaware and Hudson Co.															
Olyphant Colliery:															
Olyphant No. 2,	Shaft,	Gaseous,	Fan,	22	5.00	6.50	90	2.20	{Guibal,	Steam,	8	199,191	148,967	248,800	317
Miles,	Slope,	Gaseous,	Fan,	20	5.00	6.00	80	1.80	{Guibal,	Steam,	6	83,700	76,775	90,675	119
Grassy Island No. 1,	Shaft,	Non-gas.	Fan,	20	5.00	6.00	70	1.00	{Guibal,	Steam,	6	101,900	88,600	112,800	172
Grassy Island No. 2,	Shaft,	Gaseous,	Fan,	28	7.00	8.00	60	2.25	{Guibal,	Steam,	2	117,400	68,720	124,540	20
Grassy Island No. 2,	Slope,	Gaseous,	Fan,									112,300	98,700	125,300	285
Grassy Island No. 5, [†]	Drift,	Non-gas.	Natural,												

[†]Ventilated by fan at Grassy Island No. 2 shaft.

[‡]Robbing pillars.

Eddy Creek Colliery, No. 4, Bird's Eye Clark vein, Bird's Eye New County vein,	Shaft, Drift, Drift, Drift,	Gaseous, Non-gas, Non-gas, Non-gas,	Fan, Fan, Fan, Fan,	28 10 10 8	8.00 3.33 3.50 3.00	7.75 2.50 2.00 2.16	125 180 200	Guibal, Guibal, Guibal, Guibal,	Steam, Steam, Electricity, Electricity,	2 2 2 2	44,850 43,320 41,100 49,095	51,730 49,450 57,160	93 54 84
Delaware, Lackawanna and Western Railroad Co. Storrs Colliery: Storrs No. 1, Storrs No. 2, Storrs No. 3,	Shaft, Shaft, Shaft, Shaft,	Gaseous, Gaseous, Gaseous, Gaseous,	Fan, Fan, Fan, Fan,	14 16 24	4.00 6.00 8.00	3.25 4.00 7.30	124 118 70	{Guibal, {Guibal, {Guibal,	Steam, Steam, Steam,	9 9 8	133,870 156,623 113,930	147,845 163,962 155,011	324 454 293
Pennsylvania Coal Co. No. 1 Colliery: No. 1, No. 2, Gipsy Grove,	Shaft, Drift, Shaft,	Gaseous, Non-gas, Non-gas,	Fan, Fan, Fan,	17.50 17.50 17.50	5.00 5.00 5.00	4.50 4.50 4.50	60 70 70	{Guibal, {Guibal, {Guibal,	Steam, Steam, Steam,	6 8 5	81,900 99,959 65,040	85,700 96,330 80,110	228 289 194
Sterrick Creek Coal Co. Sterrick Creek, Sterrick Creek,	Shaft, Drift,	Gaseous, Non-gas,	Fan, Fan,	25.00 16.00	5.00 4.50	5.50 4.50	65 70	Guibal, Guibal,	Steam, Steam,	5 8	106,100 88,680	107,500 89,825	250 242
Lackawanna Coal Co. Lackawanna Colliery: Lackawanna No. 1, Lackawanna No. 4,	Shaft, Shaft, Shaft,	Gaseous, Gaseous,	Fan, Fan, Fan,	20.00 30.00	5.00 10.00	4.00 8.00	80 55	Guibal, Guibal,	Steam, Steam,	3 4	72,775 63,000	57,450 46,000	215 194
Dolph Coal Co. Dolph Colliery: Haeckley, Clark vein, Hannah Bell,	Slope, Drift, Slope,	Non-gas, Non-gas, Non-gas,	Fan, Fan, Fan,	20.00 20.00 20.00	6.00 6.00 5.00	6.00 6.00 4.00	60 60 60	{Guibal, {Guibal, {Guibal,	Steam, Steam, Steam,	1 2 1	40,180 70,700 64,525	40,190 70,720 66,850	68 60 90
Mount Jessup Coal Co. Mount Jessup Colliery: Peck's,	Shaft,	Gaseous,	Fan,	16.00	6.00	4.50	85	Guibal,	Steam,	6	46,800	52,100	80
Moosic Mountain Coal Co. Marshwood, Blakely Coal Co.	Drift, Slope,	Non-gas, Non-gas,	Fan, Natural,	12.00	4.00	4.50	75	Guibal,	Steam,	3	75,550	81,800	138

*Idle.

TABLE I.—Operators, location of collieries, railroads, etc.

Names of Operators and Collieries	County	Name of General Superintendent	Post Office	Name of Superintendent	Post Office	Railroad to Mine
Scranton Coal Co. Johnson, Ontario, Richmond No. 3, Ontario Washery,	Lackawanna, ---	William L. Allen, ---	Peckville, ---	{ John K. Berkheiser, John K. Berkheiser, John J. VonBergen, John K. Berkheiser,	Olyphant, Olyphant, Scranton, Olyphant,	N. Y., O. and W.
Delaware and Hudson Co. Olyphant, Eddy Creek, Grassy Island Washery,	Lackawanna, ---	C. C. Rose, ---	Scranton, ---	E. R. Pettabone, ---	Dorranceton, ---	Delaware and Hudson
Delaware, Lackawanna and Western Railroad Co. Storrs,	Lackawanna, ---	R. A. Phillips, ---	Scranton, ---	Walter Reese, ---	Scranton, ---	D., L. and W.
Pennsylvania Coal Co. No. 1 Colliery, Gipsy Grove,	Lackawanna, ---	W. W. Inglis, ---	Dunmore, ---	David Girvan, ---	Dunmore, ---	Erie
Sterrick Creek Coal Co. Sterrick Creek,	Lackawanna, ---	F. H. Hemelright, ---	Scranton, ---	Joseph Reese, ---	Olyphant, ---	Erie
Lackawanna Coal Co. Lackawanna,	Lackawanna, ---	F. H. Hemelright, ---	Scranton, ---	Joseph Reese, ---	Olyphant, ---	Erie
Dolph Coal Co. Dolph,	Lackawanna, ---	W. G. Robertson, ---	Scranton, ---			Erie
Mount Jessup Coal Co. Mount Jessup,	Lackawanna, ---			John T. Cartwright, ---	Winton, ---	D., L. and W.
Moosis Mountain Coal Co. Marshwood,	Lackawanna, ---	Chas. P. Ford, ---	Marshwood, ---			*
Blakely Coal Co. Blakely,	Lackawanna, ---	B. E. Kingsley, ---	Olyphant, ---			†

*Coal prepared at Mount Jessup colliery.

†Hauled in wagons to railroad.

TABLE 2.—Number of tons of coal mined, number of days worked, number of persons employed, number killed and injured, quantity of powder and dynamite used, etc.

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Number of kegs of powder used	Number of pounds of dynamite used	Number of horses and mules
Scranton Coal Co.												
Johnson, -----		433,889	40,280	3,926	478,105	221	1,254	5	2	20,589	56,050	129
Ontario, -----		365,875	40,000	2,102	348,037	239	1,070	1	2	13,751	125,170	107
Richmond No. 3, -----	Lackawanna,	171,022	13,140	4,114	188,276	228	485	4	2	8,500	14,300	45
Ontario Washery, -----		910,786	93,430	10,202	1,014,418	64	2,809	10	6	42,850	106,129	281
Totals, -----		30,720	251		30,971	64	62					
Delaware and Hudson Co.												
Olyphant, -----		941,506	93,430	10,453	1,045,389	---	2,871	10	6	42,850	196,120	281
Eddy Creek, -----	Lackawanna,	594,597	80,176	6,552	681,325	230	1,450	4	7	28,331	18,477	107
Grassy Island Washery, -----		178,180	11,018	1,109	190,307	179	449	1	3	9,668	1,548	36
Totals, -----		772,777	91,194	7,751	871,722	11	1,939	5	10	38,049	20,025	143
Delaware, Lackawanna and Western Railroad Co.												
Storrs, -----	Lackawanna,	300	320	---	620	---	13	---	---	---	---	---
Totals, -----		773,077	91,514	7,751	872,342	---	1,952	5	10	38,049	20,025	143
Delaware, Lackawanna and Western Railroad Co.												
Storrs, -----	Lackawanna,	702,261	71,517	4,989	778,767	245	1,505	8	14	34,373	31,000	84

TABLE 2—Continued

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Number of kegs of powder used	Number of pounds of dynamite used	Number of horses and mules
Pennsylvania Coal Co.	Lackawanna,	524,258	13,370	2,243	539,871	265	861	3	5	23,399	15,162	78
No. 1 Colliery, -----		147,747	5,000	-----	152,747	248	336	4	2	6,914	1,287	37
Gipsy Grove, -----		-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Totals, -----		672,005	18,370	2,243	692,618	-----	1,197	7	7	30,343	16,449	115
Sterrick Creek Coal Co.	Lackawanna,	499,815	40,323	4,225	544,363	274	1,052	5	6	20,893	65,474	100
Sterrick Creek, -----		-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Lackawanna Coal Co.	Lackawanna,	346,781	42,316	5,854	394,951	279	1,024	6	9	15,594	130,976	76
Lackawanna, -----		-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Dolph Coal Co.	Lackawanna,	183,913	25,000	871	209,784	167	568	1	1	8,500	12,425	51
Dolph, -----		-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Mount Jessup Coal Co.	Lackawanna,	130,761	15,000	1,875	147,636	247	426	1	1	5,875	13,247	39
Mount Jessup, -----		-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Moosic Mountain Coal Co.	Lackawanna,	117,834	7,800	1,677	127,311	221	319	1	2	5,500	7,125	49
Marshwood, -----		-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Blakely Coal Co.	Lackawanna,	8,117	730	2,504	11,351	250	33	-----	-----	214	-----	3
Blakely, -----		-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Grand totals, -----		4,376,100	406,000	42,442	4,824,542	-----	10,917	41	56	202,251	492,841	941

TABLE 2.—Part 2

Names of Operators	County	Number of Boilers				Locomotives			Number of steam engines of all classes	Total horse power	Number of pumps delivering water to surface	Capacity in gallons per minute	Quantity delivered to surface per minute—gallons	Number of electric dynamos	Number of air compressors	
		Cylindrical	Horse power	Tubular	Horse power	Total horse power	Steam	Air								Electric
Seranton Coal Co.,	Lackawanna,	25	655	34	3,981	4,636	8	---	74	4,986	17	21,330	13,500	5	1	
Delaware and Hudson Co.,		24	648	16	3,500	4,148	7	8	85	4,769	8	10,300	5,900	3	4	
Delaware, Lackawanna and Western Railroad Co.,		5	625	8	2,400	3,025	4	---	29	2,510	2	2,160	1,150	5	---	
Pennsylvania Coal Co.,		---	---	12	1,600	1,600	4	---	27	1,585	1	1,000	4,000	1	3	
Sterrick Creek Coal Co.,		---	---	8	1,800	1,800	7	---	17	2,100	4	2,764	2,100	1	2	
Lackawanna Coal Co.,		---	---	8	2,000	2,000	2	5	18	2,300	9	10,500	4,600	2	---	
Dolph Coal Co.,		---	---	12	2,195	2,195	3	---	28	1,285	5	1,500	300	3	---	
Mount Jessup Coal Co.,		---	---	10	1,000	1,000	2	---	12	605	4	3,300	1,600	1	---	
Moosic Mountain Coal Co.,		---	---	3	290	290	1	---	4	105	2	800	450	1	---	
Biakely Coal Co.,		---	---	3	165	165	---	---	3	270	---	---	---	---	---	
Totals,		---	54	1,928	114	19,591	21,519	38	8	297	20,515	52	53,654	53,600	22	13

Table 3.—Number of each class of employees inside and outside of mines

Names of Operators and Collieries	County	Inside										Outside							Grand total inside and outside			
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Doorboys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Foremen	Blacksmiths and carpenters	Engineers and firemen	State pickers (boys)	State pickers (men)		Bookkeepers and clerks	All other employes	Total outside
Scranton Coal Co. Johnson, Ontario, Richmond No. 3,	Lackawanna,	2	3	7	321	302	139	60	16	122	972	1	1	1	19	39	49	35	2	136	282	1,251
		2	5		315	185	92	18	8	85	710	1	2	16	39	65	102	2	133	360	1,070	
		1		3	117	100	72	18	2	52	395	1	1	10	22	20	26	2	38	120	485	
Ontario Washery,		5	8	10	753	587	303	96	26	259	2,017	3	4	45	100	134	163	6	307	762	2,809	
												1	1	1	4	14			2	39	62	
Totals,		5	8	10	753	587	303	96	26	259	2,047	4	5	46	104	148	163	8	346	824	2,871	
Delaware and Hudson Co. Olyphant, Eddy Creek,	Lackawanna,	4	3	9	396	484	113	18	9	17	1,186		2	11	49	25	48	4	165	304	1,490	
			2		118	133	53	7		16	1	330		1	7	8	12	31	1	50	119	449
		4	5	9	514	617	166	25	9	149	1,516	3	3	18	57	37	79	5	224	433	1,939	
Totals,		4	5	9	514	617	166	25	9	149	1,516	4	4	19	59	37	79	6	232	436	1,932	
Delaware, Lackawanna and Western Railroad Co. Storrs,	Lackawanna,	5	1	10	451	470	90	18	6	154	1,230		2	15	28	50	9	3	118	225	1,505	

TABLE 3.—Part 2

Names of Operators and Collieries	County	Number of Days Worked in Breaker												Total	
		January	February	March	April	May	June	July	August	September	October	November	December		
Scranton Coal Co.	Lackawanna,	23	21	15	21	22	20	15	14	14	16	19	21	21	221
Johnson, Ontario,		23	22	22	21	22	23	16	17	17	17	19	21	21	239
Richmond No. 3,		23	20	22	20	20	21	19	18	13	15	17	20	20	228
Olyphant, Eddy Creek,	Lackawanna,	22	20	21	21	18	18	16	17	18	20	20	19	20	230
Delaware and Hudson Co.		20	21	20	7	-----	5	16	17	18	18	18	19	19	179
Delaware, Lackawanna and Western Railroad Co.	Lackawanna,	22	20	23	20	22	22	22	8	21	20	22	22	245	
Storrs,	Lackawanna,	23	19	24	24	24	25	19	21	18	24	23	21	265	
No. 1 Colliery, Gipsy Grove,		20	18	22	22	22	20	19	20	18	22	20	19	248	
Pennsylvania Coal Co.		-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Sterrick Creek, Sterrick Creek Coal Co.	Lackawanna,	22	23	24	24	24	26	19	20	21	26	23	22	274	
Lackawanna, Lackawanna Coal Co.	Lackawanna,	23	22	23	23	24	26	24	22	20	25	23	24	279	
Dolph, Dolph Coal Co.	Lackawanna,	16	15	15	13	15	15	-----	13	12	14	14	12	167	
Mount Jessup, Mount Jessup Coal Co.	Lackawanna,	23	21	23	20	23	20	20	15	18	21	21	21	247	
Marshwood, Moosic Mountain Coal Co.	Lackawanna,	22	19	21	20	18	17	19	14	17	18	18	18	221	
Blakely, Blakely Coal Co.	Lackawanna,	23	22	22	10	22	23	23	22	23	22	22	16	250	

TABLE 4.—Fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Mine	County	Nature and Cause of Accident in Brief
Jan. 3	George Guze, -----	Slavonian, -----	Miner, -----	34	M.	1	5	Pennsylvania No. 1, Richmond No. 3,-----		Killed by fall of bell roof at face of his working place. Killed by falling into shaft. He had worked only a few days in the mines. In going out after working hours, he lost his light and strayed to the wrong shaft, and must have opened the gates, as three persons testified that the gates were closed.
3	Peter Smith, -----	Lithuanian, -----	Laborer, -----	18	S.	-----	-----	-----		
4	Michael Betts, -----	Italian, -----	Miner, -----	35	M.	1	2	Sterrick Creek, -----		Fatally injured by fall of coal at face of working place. He was preparing a blast when a small piece of coal fell on his spine. Killed by falling into shaft. He was helping to place a car on the cage when the engineer lowered it. A footman claimed that no signal was given, but the engineer claims he received one.
18	Peter Farrell, -----	American, -----	Footman, -----	25	M.	1	1	Johnson, -----	Lackawanna,	
21	Gagola Orest, -----	Italian, -----	Laborer, -----	21	S.	-----	-----	Mount Jessup, -----		Fatally burned by powder near face of working place. He was putting a ball of cotton in the powder box when, it is supposed, his light ignited the powder.
30	William McHugh, -----	American, -----	Miner, -----	39	M.	1	3	Olyphant, -----		Killed by fall of roof at face of working place. He had fired a blast and returned to it too soon. Fatally injured by cars. He was riding between the cars with an armful of sprags, when he fell under the cars.
Feb. 10	Charles Strawham, -----	Polish, -----	Runner, -----	18	S.	-----	-----	Johnson, -----		

TABLE 4.—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single			Number of widows			Name of Mine	County	Nature and Cause of Accident in Brief
					M.	M.	M.	1	2	2			
Feb. 18	Anthony Push, -----	Slavonian,	Miner, -----	22	M.	1	-----	-----	-----	Olyphant, -----		Killed by fall of roof at face of chamber. He was resting two props that had been discharged by a blast.	
10	Dominick Fiarante, --	Italian, -----	Miner, -----	34	M.	1	2	-----	-----	Ontario, -----		Killed by fall of roof at face of his chamber.	
24	Michael Kindred, ----	Slavonian,	Miner, -----	29	M.	1	2	-----	-----	Pennsylvania		Killed by fall of bell roof at face of his chamber.	
29	Jacob Jerlinski, -----	Lithuanian,	Miner, -----	35	M.	1	-----	-----	-----	Richmond No. 3,--		Killed by fall of roof at face of chamber while barring down loose coal after a blast.	
Mar. 2	Thomas Whitley, -----	American,--	Fireman, -----	22	M.	1	1	-----	-----	Lackawanna, -----		Fatally injured. One of boilers tubes burst and the force blew the hot coals on him. He died March 12.	
2	Thomas Rothwell, ---	English,-----	Sinker, -----	30	M.	1	1	-----	-----	Eddy Creek, -----	Lackawanna,	Killed by a small piece of coal or ice that fell down the shaft. He had just started to work after trimming the shaft.	
April 7	Pedro Grass, -----	Italian,-----	Laborer, -----	33	M.	1	2	-----	-----	Gipsy Grove, -----		Fatally injured by cars on the slope. He had passed the manway and was walking up the slope when a runaway car struck him.	
25	Adam Gorzenski, ----	Polish,-----	Miner, -----	46	M.	1	-----	-----	-----	Johnson, -----		Killed by fall of bell rock while examining the roof after a blast.	
May 7	Balentine Destick, ---	Polish,-----	Laborer, -----	28	S.	-----	-----	-----	-----	Gipsy Grove, -----		Killed by fall of roof at face of chamber. The miner had warned him to keep out of the place.	
7	John Firdenko, -----	Russian,---	Laborer, -----	22	S.	-----	-----	-----	-----	Starlick Creek, ---		Fatally injured by fall of roof at face of chamber while examining it after a blast had been fired.	

Fatally injured by cars on passing branch. He was side hitching and for some unknown reason he crossed over on the wrong side and was squeezed between cars and rib.
 Killed by falling into shaft. He was on the cage with seven other persons; four of whom testified that they could not explain how he fell. The cage was well protected.
 Killed by fall of roof at face of his chamber. He had neglected to bar it down.
 Killed by falling off a mule's back while riding to the barn. Outside.
 Killed by falling into breaker machinery. He climbed on top of a screen casing to throw dust on some boys when he fell.
 Killed by blast at face of working place. He thought he heard the squib miss fire and he returned just as the blast went off.
 Killed by fall of bell roof at face of his working place.
 Killed by fall of roof at face of his working place while resting props that had been dislodged by a blast. He had neglected to examine the place after blasting.
 Killed by fall of roof at face of chamber. The miner went out on the gangway in search of a car to stand on to examine the place after it had been blasted, but Zdanofski went into the face to work.
 Killed by fall of bell roof at face of his working place.
 Killed. Fell into shaft. He became dizzy and fell off the cage.
 Killed by fall of bell roof at face of working place. His laborer had called his attention to it.
 Killed by blast at face of chamber. The miner, Stanley Ofat, in the next chamber fired a blast that broke through the cross-cut. He gave no warning. He was tried before a jury who returned a verdict of not guilty, but he had to pay the costs.
 Killed by fall of slip rock at face of his working place.

May 11	Michael Dirbbs, -----	Polish, -----	Driver, -----	18	S. -----	Dolph, -----
14	Andrew Pitcavage, ---	Polish, -----	Laborer, -----	30	M. 1	3 Gipsy Grove, -----
28	Frank Dido, -----	Slavonian, -----	Miner, -----	53	M. 1	3 Storrs, -----
June 15	Wallace Walker, -----	English, -----	Driver, -----	20	S. -----	Olyphant, -----
24	Stephen Miko, -----	Slavonian, -----	Statepiker, -----	18	S. -----	Richmond No. 3, ---
July 6	John Sisygiski, -----	Polish, -----	Miner, -----	42	M. 1	5 Lackawanna, -----
17	Leo Rodofski, -----	Polish, -----	Miner, -----	33	M. 1	2 Lackawanna, -----
Aug. 1	Joseph Niebasicy, -----	Polish, -----	Miner, -----	40	M. 1	2 Storrs, -----
11	Anthony Zdanofski, ---	Polish, -----	Laborer, -----	28	M. 1	2 Storrs, -----
12	John Loretti, -----	Italian, -----	Laborer, -----	30	S. -----	Starrick Creek, ---
21	Joseph Misura, -----	Polish, -----	Driver, -----	21	S. -----	Lackawanna, -----
24	Frank Yhoziski, -----	Polish, -----	Miner, -----	27	M. 1	4 Johnson, -----
28	John Moranko, -----	Polish, -----	Driver, -----	19	S. -----	Storrs, -----
Sept. 14	John Seer, -----	Welsh, -----	Miner, -----	59	M. 1	Marshwood, -----

Lackawanna,

TABLE 4—continued.

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Mine	County	Nature and Cause of Accident in Brief
Sept. 24	John Washko, -----	Slavonian, -----	Miner, -----	45	M. 1	4	4	Pennsylvania No. 1,		Fatally injured by cars at face of his chamber. He attempted to run a car out of his chamber and while crossing the track in front of the car, he slipped and fell under it. He died October 11.
Nov. 5	David J. Owens, -----	American, -----	Driver, -----	18	S. -----	-----	-----	Olyphant, -----		Killed by fall of roof at top of Kindricks plane while he was driving his mule.
7	Edward Smith, -----	Polish, -----	Runner, -----	22	S. -----	-----	-----	Sterrick Creek, -----		Killed by blast. He was standing on the gangway road and thought he was safe, but a piece rebounded and struck him.
10	Frank Burke, -----	American, -----	Company man, -----	29	M. 1	-----	-----	Sterrick Creek, -----		Killed by falling into shaft. The engineer took the cage away as he was getting on it.
11	Vito Briscessie, -----	Italian, -----	Laborer, -----	50	M. 1	1	1	Gipsy Grove, -----	Lackawanna,	Killed by cars. He was cleaning the road between two cars when a runner accidentally bumped the cars. Outside.
14	Jacob Bowman, -----	German, -----	Foreman, -----	69	M. 1	-----	-----	Storrs, -----		Killed by cars. He did not hear the locomotive coming and while crossing the track he was struck by the cars. Outside.
17	James Wilson, -----	English, -----	Laborer, -----	23	S. -----	-----	-----	Storrs, -----		Killed by fall of roof at face of his chamber. The miner was tamping a hole in it to blow it down.
30	Frank Rolka, -----	Russian, -----	Miner, -----	34	M. 1	6	6	Johnson, -----		Killed by fall of roof at face of his working place. The foreman had ordered him to take it down, but he neglected to do so.
Dec. 3	Roger Gillus, -----	Polish, -----	Miner, -----	32	S. -----	-----	-----	Storrs, -----		Killed by fall of slip rock at face of his working place.
5	John Smith, -----	Polish, -----	Laborer, -----	48	M. 1	1	1	Richmond No. 3, -----		Fatally injured by fall of slip coal at face of his working place.

Dec.	9	Michael Saboy, ----- Frank Gazcina, -----	Polish, ----- Polish, -----	Miner, ----- Laborer, -----	32 M. ----- 24 S. -----	1	3	Lackawanna, ----- Lackawanna, -----	Lackawanna, ----- Lackawanna, -----
	19	Joseph Haenalk, -----	Slavonian, -----	Footman, -----	28 S. -----			Storrs, -----	Lackawanna, -----

Killed by blast. No one saw the accident, but from the condition of the place it was decided that they were killed while tamping a hole. A part of a bit remained in the hole and a bent tamping bar lay alongside of the hole. Fatally injured by piece of coal that fell down breaker tower. Outside.

TABLE 5.—Non-fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Mine	County	Nature and Cause of Accident in Brief
Jan. 13	Joseph Jnglushi, -----	Hungarian, -----	Driver, -----	19	S.	Ontario, -----		Head and hips seriously injured by cars on gangway road. He was pushing back a car, when the mule started and threw him under the car.
13	Michael Petruchko, -----	Polish, -----	Laborer, -----	32	S.	Mount Jessup, -----		Hip dislocated by cars. While he was riding on a car he fell off and under the car. Outside.
15	Joseph Hushua, -----	Polish, -----	Laborer, -----	23	S.	Lackawanna, -----		Ankle fractured. He was handling T rails when he stumbled and the rails struck his ankle.
20	William Siturra, -----	Austrian, -----	Miner, -----	40	M.	Lackawanna, -----		Back injured by fall of rock at face of chamber while mining out a blast.
21	George Kinko, -----	Slavonian, -----	Miner, -----	29	M.	Pennsylvania No. 1, -----		Seriously injured by powder. He was thawing out atlas powder with his lamp when it exploded and both hands were blown off.
24	James Fally, -----	American, -----	Brakeman, -----	17	S.	Olyphant, -----	Lackawanna, -----	Skull fractured. Struck by switch lever. He was stooping down to throw the lever, when the engine came on the switch and threw the lever up. Outside.
27	Nyses Cariliri, -----	Italian, -----	Miner, -----	62	M.	Lackawanna, -----		Small bone in leg fractured by car at face of chamber.
Feb. 10	Thomas Knopeck, -----	Slavonian, -----	Laborer, -----	45	M.	Olyphant, -----		Both legs fractured by fall of roof at face of chamber.
13	Anthony Slavinski, -----	Slavonian, -----	Miner, -----	43	M.	Dolph, -----		Ankle fractured while running away from blast.
17	Benjamin Hunter, -----	American, -----	Tracklayer, -----	44	M.	Storrs, -----		Face and hands burned by explosion of gas that occurred at foot of bore hole that had become blocked.
18	William Carroll, -----	American, -----	Runner, -----	21	S.	Johnson, -----		Leg fractured by cars. He was riding on front end of car that became derailed going down a grade.

Feb.	22	John O'Mally, ---	Irish, ---	Runner, ---	42	M.	Richmond No. 3, ---	Leg fractured by cars on top of plane. Internally injured by cars on gangway road. He paid no attention to the warning of a laborer and door tender to get out of the way.
	28	Michael Gitehnavich, ---	Polish, ---	Laborer, ---	33	M.	Richmond No. 3, ---	
Mar.	3	Joseph Klivitus, ---	Polish, ---	Miner, ---	48	M.	Storrs, ---	Skull fractured by fall of slip rock at face of chamber.
	5	Richard Arscott, ---	Welsh, ---	Miner, ---	31	M.	Storrs, ---	Face and body lacerated by fall of roof at face of chamber.
	9	Isaac Clemev, ---	English, ---	Miner, ---	33	S.	Ontario, ---	Chest and shoulders injured by fall of roof while mining out a shot at face of chamber.
	16	Anthony Latson, ---	Italian, ---	Laborer, ---	32	M.	Pennsylvania No. 1, ---	Leg fractured by cars. He was placing a car on the track when the blocking gave way.
	20	Anthony Decker, ---	Polish, ---	Driver, ---	17	S.	Eddy Creek, ---	Right leg lacerated. Fell under car on gangway road.
	23	John Lacojski, ---	Polish, ---	Driver, ---	16	S.	Johnson, ---	Body lacerated by cars. The car ran into a pile of rails and upset them. Outside.
April	7	Edward Shutly, ---	Polish, ---	Miner, ---	28	M.	Gipsy Grove, ---	Collar bone fractured by car. He had passed the manway and was walking up the slope when he was struck by a runaway car.
	11	William Sullivan, ---	Irish, ---	Doortender, ---	74	M.	Storrs, ---	Leg fractured. Struck by fans in cage. The footman put the fans on the cage not knowing that a man was going to the lower vein.
	18	Thomas Hall, ---	Welsh, ---	Driver, ---	18	S.	Storrs, ---	Arm fractured by moving a prop at face of chamber.
	23	Andrew Kozak, ---	Slavonian, ---	Driver, ---	20	S.	Sterrick Creek, ---	Leg fractured by a derailed car.
	29	William Hill, ---	English, ---	Miner, ---	52	M.	Storrs, ---	Shoulder bruised by fall of rock at face of chamber while standing a prop under it.
May	27	Andrew Kolback, ---	Polish, ---	Laborer, ---	31	M.	Lackawanna, ---	Ankle fractured by fall of roof at face of his working place.
June	1	Bernard Gafney, ---	American, ---	Footman, ---	22	S.	Storrs, ---	Leg crushed by derailed car on slope.
	10	John Weiland, ---	American, ---	Driver, ---	21	S.	Sterrick Creek, ---	Leg fractured by mule falling on him.
	19	Andrew Verbeski, ---	Polish, ---	Driver, ---	17	S.	Storrs, ---	Toc fractured by cars while riding on bumper.
	19	Walter Nysoski, ---	Russian, ---	Laborer, ---	26	S.	Storrs, ---	Leg fractured by car at face of chamber.
	22	Charles Klevenski, ---	Polish, ---	Miner, ---	28	S.	Pennsylvania No. 1, ---	Arm fractured by fall of bony that he was barring down at face of working place.
July	6	Andrew Danko, ---	Slavonian, ---	Slatenicker, ---	17	S.	Gipsy Grove, ---	Leg fractured. Fell on tracks. Outside.
	11	Dominiek Rosfalo, ---	Polish, ---	Laborer, ---	19	S.	Storrs, ---	Leg fractured by fall of slip rock while helping to place car on track in next chamber.

Lackawanna, ---

TABLE 5—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Mine	County	Nature and Cause of Accident in Brief
July 13	Stephen Gudaska, ---	Russian, ---	Laborer, ---	40	S.	Sterrick Creek, ---		Leg fractured while pushing cars. Outside.
17	John Vanot, ---	Russian, ---	Laborer, ---	20	S.	Lackawanna, ---		Seriously injured by fall of bell rock at face of chamber.
27	Robert Manichete, ---	Italian, ---	Miner, ---	24	S.	Lackawanna, ---		Three fingers blown off while handling explosives.
27	Peter Copjish, ---	Russian, ---	Runner, ---	19	S.	Sterrick Creek, ---		Leg fractured by car that became derailed while he was pushing it.
Aug. 3	Simon Youshaek, ---	Russian, ---	Laborer, ---	28	M.	Olyphant, ---		Injured by car that upset while he was riding in it. Outside.
5	William Hughes, ---	American, ---	Bratticeman, ---	21	S.	Storrs, ---		Leg fractured by fall of roof at face of chamber while tearing down a length of brattice.
13	Joseph Pinnott, ---	Italian, ---	Miner, ---	27	M.	Pennsylvania No. 1, ---	Lackawanna, ---	Injured by fall of bell rock at face of chamber.
22	John Daley, ---	Irish, ---	Miner, ---	61	M.	Eddy Creek, ---		Back injured by fall of roof at face of chamber while he was barring it down.
24	James Grant, ---	Italian, ---	Miner, ---	41	M.	Marshwood, ---		Back injured by fall of roof while maling out a shot at face of working place.
28	Edward Elvet, ---	American, ---	Laborer, ---	30	M.	Sterrick Creek, ---		Leg fractured by car at face of working place. He was pushing a truck back over the road.
Sept. 4	Lloyd Farry, ---	Welsh, ---	Footman, ---	30	M.	Lackawanna, ---		Injured by cars. The motor pushed cars on wrong track and as he did not hear them coming he was squeezed between a post and the cars.
9	John A. Robinson, ---	American, ---	Fire boss, ---	48	M.	Storrs, ---		Burned by explosion of gas while working at foot of shaft. He climbed to a high place and when he raised his light to examine a hitch in the roof he ignited a pocket of gas.

Sept. 25	Peter Patrishi,	Italian,	Laborer,	31	S.	Marshwood,	Spine injured by fall of slip roof at face of chamber.
Oct. 2	George Hardoss,	Slavonian,	Miner,	35	M.	Pennsylvania No. 1,	Arm fractured by fall of roof at face of chamber. He failed to bar it down.
16	Con Brown,	American,	Driver,	19	S.	Olyphant,	Leg fractured by car. He stooped to pick up his lamp and was struck by car.
19	Theodore Shlbitts,	Polish,	Miner,	27	S.	Storrs,	Spine injured by fall of slip rock at face of his working place.
22	Patriek Ready,	Irish,	Miner,	60	M.	Olyphant,	Ankle fractured while moving prop from road at face of chamber.
27	Stephen Harlishack,	Slavonian,	Laborer,	30	M.	Olyphant,	Leg fractured by fall of rock from the gob on gangway road.
28	John Kose,	Hungarian,	Laborer,	30	M.	Lackawanna,	Ankle dislocated by fall of slip rock at face of working place.
Nov. 3	John Setato,	Slavonian,	Miner,	32	M.	Olyphant,	Leg fractured by fall of roof at face of chamber while resting a prop.
7	George Kasumba,	Polish,	Miner,	30	S.	Eddy Creek,	Small bone in ankle broken by fall of coal at face of chamber while barring it down.
21	William Sullivan,	American,	Doortender,	74	M.	Storrs,	Hips contused by cars on gangway. He stepped into the road after a trip passed, but a part of the trip became uncompleted and ran back into him.
Dec. 16	Charles Roberts,	American,	Driver,	17	S.	Lackawanna,	Injured by cars on gangway road.
17	Michael Manneck,	Russian,	Belt-boy,	16	S.	Sterrick Creek,	Injured. Struck by slope rope when it left the pulleys.

Lackawanna, ---

CONDITION OF COLLIERIES

SCRANTON COAL COMPANY

Johnson Colliery No. 1 Shaft.—Condition as to safety, ventilation and drainage good.

No. 2 Shaft.—Condition as to safety, ventilation and drainage good.

Ontario Colliery.—Tunnel.—Condition as to safety, ventilation and drainage good.

Klondyke.—Condition as to safety, ventilation and drainage good.

Sturgess.—Condition as to safety, ventilation and drainage good.

Blue Ridge Shaft.—Condition as to safety, ventilation and drainage good.

Blue Ridge Tunnel.—Condition as to safety good; ventilation and drainage fair.

Richmond Colliery No. 3.—Condition as to safety and ventilation good; drainage fair.

DELAWARE AND HUDSON COMPANY

Olyphant Colliery No. 2 Shaft.—Condition as to safety, ventilation and drainage good.

Grassy Island Slope.—Condition as to safety, ventilation and drainage good.

Grassy Island No. 1 Shaft.—Condition as to safety, ventilation and drainage good.

Grassy Island No. 2 Shaft. Condition as to safety, ventilation and drainage good.

Miles Slope.—Condition as to safety and ventilation good; drainage fair.

Eddy Creek Colliery, Birds Eye Drift.—Condition as to safety, ventilation and drainage good.

No. 4 Drift.—Condition as to safety, ventilation and drainage good.

DELAWARE, LACKAWANNA AND WESTERN RAILROAD COMPANY

Storrs Colliery No. 1 Shaft.—Condition as to safety, ventilation and drainage good.

No. 2 Shaft.—Condition as to safety good; ventilation and drainage fair.

No. 3 Shaft.—Condition as to safety, ventilation and drainage good.

PENNSYLVANIA COAL COMPANY

No. 1 Colliery.—No. 1 Shaft.—Condition as to safety, ventilation and drainage good.

No. 2 Shaft.—Condition as to safety, ventilation and drainage good.

Gipsy Grove Colliery.—Condition as to safety good; ventilation and drainage fair.

STERRICK CREEK COAL COMPANY

Sterrick Creek Colliery.—Condition as to safety, ventilation and drainage good.

LACKAWANNA COAL COMPANY

Lackawanna Colliery.—Condition as to safety and ventilation good; drainage fair.

DOLPH COAL COMPANY

Dolph Colliery.—Condition as to safety, ventilation and drainage good.

MOUNT JESSUP COAL COMPANY

Mount Jessup Colliery.—Condition as to safety, ventilation and drainage good.

MOOSIC MOUNTAIN COAL COMPANY

Marshwood.—Condition as to safety good; ventilation and drainage good.

BLAKELY COAL COMPANY

Blakely Colliery.—Condition as to safety, ventilation and drainage good.

IMPROVEMENTS

SCRANTON COAL COMPANY

Johnson Colliery: Johnson No. 1.—An air compressor 24 x 24½ x 30 feet installed.

Johnson No. 2.—Installed a 10-foot fan at Mountain shaft; rebuilt plane trestle and constructed a 2,500-ton breaker.

Ontario Colliery: Sturgess Shaft.—Rebuilt tower and trestle and installed two boilers, 66 inches x 16 feet.

Blue Ridge Shaft.—Installed a return boiler, 66 inches x 16 feet.

Ontario Washery.—Installed one 54 inch fire-box boiler.

DELAWARE AND HUDSON COMPANY

Olyphant Colliery: Olyphant No. 2.—Installed an additional electric generator to furnish power for operating hoists, fans and pumps at Birds Eye No. 10 slope; lights and signals at Grassy Island No. 2, consisting of an 18 inch x 18 foot McEwen engine and a 150 K. W. generator.

Grass Island No. 2, Rock Vein.—Graded 1,400 feet of main gangway to shaft landing; graded 120 feet for chain hoist of light cars, and 150 feet for light car road.

Grassy Island No. 4 Shaft.—Completed sinking shaft to No. 4 Dunmore vein to a depth of 740 feet, connecting with workings from Grassy Island No. 2 shaft for a second opening. Shaft was concreted from surface 56 feet down the shaft, including concrete buttons.

No. 10 Slope.—Placed an electric pump at foot of slope; installed an electric hoist to hoist coal up inside slope and lower down plane. Installed a 24 inch x 48 foot engine for hoisting on main slope, 2,600 feet long.

Eddy Creek Colliery: Eddy Creek.—Sunk shaft from Fourteen Foot vein to Dunmore No. 4, a depth of 414 feet; gangways opened on North side 120 feet and on South side 70 feet in No. 4 Dunmore.

Birds Eye.—Drilled a 6½ inch electric cable hole 120 feet from surface to Clark vein, and a 12 inch water hole the same depth a few feet from it.

No. 11 Slope.—Was driven to No. 2 vein a distance of 120 feet on grade of 20 per cent. An engine house was erected containing 3 engines; one 10 x 12 inches to operate No. 11 slope; one 10 x 12 inches to operate plane to rock dump, and one 12½ x 15 inches to operate No. 18 plane in Diamond vein.

PENNSYLVANIA COAL COMPANY

No. 1 Colliery.—Outside. Built a 45 x 29 foot concrete building with steel truss roof, containing one pair of 15 x 36 inch engines which will operate two slopes, one to the Clark vein and the other to the New County vein.

No. 2 Shaft.—Outside. Built a concrete building 42 x 15 feet to be used as an emergency hospital, tool room and blacksmith shop.

MINE FOREMEN'S EXAMINATIONS

The annual examination of applicants for certificates of qualification as mine foremen and assistant mine foremen was held in City Hall, Scranton, June 15 and 16. The Board of Examiners was composed of L. M. Evans, Inspector, Scranton; F. G. Wolfe, Engineer, Scranton; W. F. Malloy, Carbondale, and David Evans, Olyphant, Miners.

The following persons passed a successful examination and were granted certificates:

Mine Foremen

John Conway, Old Forge; Harry E. Heckman, Jessup; Leo P. Gibbons, Carbondale; William Love, Scranton; Thomas J. Gillen, Carbondale; James F. Feeney, Olyphant; Charles O'Boyle, Olyphant; Howell R. Morgan, Throop; John J. Haggerty, Scranton; Sylvester J. Kane, Forest City; George Watson, Scranton; Thomas W. Lewis, Olyphant; Benjamin Anthony, Carbondale; Edward Newton, Scranton; James Elias, Scranton; John T. Loftus, Jessup; Charles E.

McCabe, Carbondale; John J. Barbour, Childs; Patrick Fitzsimmons, Olyphant; James H. James, Olyphant; Thomas W. Cawley, Jermyn; Thomas Cowley, Jessup; Eugene Powell, Scranton; Jacob Evans, Forest City; John J. Connolly, Forest City; Richard Duggan, Carbondale; William A. Morgan, Scranton; Edward H. Lewis, Olyphant; Noah Davis, Scranton; John J. Zeagner, Scranton; John W. Finn, Scranton; Thomas Sheridan, Olyphant.

Assistant Mine Foremen

Thomas J. Kennedy, Simpson; John R. Cooper, Laffin; John B. Shepard, Forest City; Joseph McDonough, Dunmore; Samuel Dawe, Throop; Nathan Dodgson, Olyphant; John E. Morgan, Scranton; Thomas L. Morgan, Olyphant; William Bowen, Scranton; Thomas A. Bell, Olyphant; William Morgan, Scranton; Michael T. McGraw, Scranton; Thomas J. Sullivan, Olyphant; John Reed, Peckville; Edwin Thomas, Scranton; Joseph Dodgson, Olyphant; Leonard Davis, Olyphant; David Rosser, Olyphant; James Myrick, Olyphant; Joseph McNulty, Olyphant; Thomas J. Smith, Scranton; Maurice L. LaBarr, Simpson.



Third District

LACKAWANNA COUNTY

Scranton, Pa., February 22, 1909.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor of transmitting herewith my report as Inspector of Mines of the Third Anthracite District for the year ending December 31, 1908, as required by the Act of April 14, 1903.

Respectfully submitted,

H. O. PRYTHERCH, Mine Inspector.

SUMMARY OF STATISTICS

Number of collieries,	22
Number of mines,	29
Number of mines in operation,	29
Number of tons of coal shipped to market,	4,099,888
Number of tons used at mines for steam and heat,	448,026
Number of tons sold to local trade and used by employes,	126,988
Number of tons produced,	4,674,902
Number of tons produced by compressed air machines, ..	.....
Number of tons produced by electrical machines, .....	.....
Number of persons employed inside of mines,	8,209
Number of persons employed outside,	2,313
Number of fatal accidents inside of mines,	35
Number of fatal accidents outside,	4
Number of non-fatal accidents inside of mines,	58
Number of non-fatal accidents outside,	11
Number of tons of coal produced per fatal accident inside, ..	133,569
Number of persons employed per fatal accident inside, ..	234
Number of persons employed per fatal accident outside,..	578
Number of persons employed per non-fatal accident inside, ..	141
Number of persons employed per non-fatal accident outside, ..	210
Number of wives made widows,	20
Number of children orphaned,	39
Number of steam locomotives used outside,	6
Number of compressed air locomotives used inside,	23
Number of electric motors used inside,	33
Number of fans in use,	25
Number of gaseous mines in operation,	19
Number of non-gaseous mines in operation,	10
Number of new mines opened,	1

TABLE A

PRODUCTION OF COAL

Names of Operators	Tons
Delaware and Hudson Company,	1,518,087
Delaware, Lackawanna and Western Railroad Company,...	1,176,003
Scranton Coal Company,	701,953
Price-Pancoast Coal Company,	652,564
Pennsylvania Coal Company,	175,037
Green Ridge Coal Company,	118,344
A. D. and F. M. Spencer,	82,810
North End Coal Company,	77,457
Economy Light, Heat and Power Company,	60,000
Carney and Brown,	48,846
Nay Aug Coal Company,	35,490
Bull's Head Coal Company,	21,206
Clearview Coal Company,	3,675
Mountain Lake Coal Company,	3,400

Total,	<u>4,674,902</u>
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Production by Counties

Lackawanna,	<u>4,674,902</u>
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TABLE E.—Fatal and non-fatal accidents inside and outside of mines: number of tons of coal produced per accident; number of persons employed; number employed per accident; number of tons of coal produced per accident; number of employees inside per fatal accident; number of employees outside per fatal accident; number of employees inside per non-fatal accident; number of employees outside per non-fatal accident

Names of Operators	Fatal Accidents			Non-fatal Accidents			Tons of coal produced per fatal accident inside	Tons of coal produced per non-fatal accident inside	Number of employees inside	Number of employees outside	Total number of employees	Number of employees inside per fatal accident	Number of employees outside per fatal accident	Number of employees inside per non-fatal accident	Number of employees outside per non-fatal accident
	Inside	Outside	Total	Inside	Outside	Total									
	8	1	9	24	6	30										189,761	63,253	2,885	694	3,579	361	694	120	116
Delaware and Hudson Company, -----	4	1	5	12	3	15	294,001	98,000	1,761	467	2,228	440	467	147	156
Delaware, Lackawanna and Western Railroad Co., -----	7	1	8	10	1	11	77,995	70,195	1,551	395	1,746	150	395	135	395
Seranton Coal Co., -----	2	1	3	3	3	3	95,223	217,521	1,129	279	1,408	161	279	376	
Price-Pancoat Coal Co., -----	2		2				87,519		346	90	436	173			
Pennsylvania Coal Co., -----	2		2				39,172		195	79	275	98			
Green Ridge Coal Co., -----	1		1	3	1	2		27,613	32	75	107			11	75
A. D. and F. M. Spencer, -----	1		1	2	1	2	77,457		195	77	272	195		97	
North End Coal Co., -----	1		1	1	1	2	38,728	195	62	35	97			62	
Carney and Brown, -----	1	1	2	2		2	35,490	48,816	162	54	216	162	54	81	
Nay Aug Coal Co., -----	1		1	1		1	21,206	17,745	59	25	84			59	
Bull's Head Coal Co., -----	1		1	1		1		21,206	31	43	74				
Miscellaneous companies, -----															
Totals and averages for district,	35	4	39	58	11	69	133,569	80,602	8,209	2,313	10,522	234	578	141	210

TABLE C.—Classification of Fatal Accidents Inside and Outside of Mines

	Months												Totals	Percentages	
	January	February	March	April	May	June	July	August	September	October	November	December			
Causes of Accidents Inside															
Falls of roof, -----	1	2			1	2	4		1	2	3	3	19	54.29	
Mine cars, -----					1				1	2		1	5	14.29	
Explosions of powder and dynamite, -----	1												1	2.85	
Premature blasts, -----			1	2		1			1	3			8	23.86	
Falling into shafts, -----			1								1		2	5.71	
Totals, -----	2	2	2	2	2	3	4		3	7	4	4	35	100.00	
Causes of Accidents Outside															
Cars, -----		1					1						2	50.00	
Machinery, -----		1						1					2	50.00	
Totals, -----		2					1	1					4	100.00	
Grand totals inside and outside, -----	2	4	2	2	2	3	5	1	3	7	4	4	39		

TABLE D.—Classification of Non-fatal Accidents Inside and Outside of Mines

	Months												Totals	Percentages	
	January	February	March	April	May	June	July	August	September	October	November	December			
Causes of Accidents Inside															
Falls of roof, -----	2	1	6	1	2	2	1	2	5	1	4	2	29	50.00	
Mine cars, -----	3	3	1	1	2		2	1		1	1	1	16	27.58	
Premature blasts, -----	1			2	1			1	1	1	2		9	15.52	
M.iles, -----				2									2	3.45	
Miscellaneous, -----		2											2	3.45	
Totals, -----	6	6	7	6	5	2	3	4	6	3	7	3	58	100.00	
Causes of Accidents Outside															
Cars, -----	1											1	2	18.18	
Machinery, -----		1						1			1	1	4	36.36	
Miscellaneous, -----	1	1			1			2					5	45.46	
Totals, -----	2	2			1			3			1	2	11	100.00	
Grand totals inside and outside, -----	8	8	7	6	6	2	3	7	6	3	8	5	69		

TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
Inside													
Miners, -----	1	2	2	2		2	4		2	5	2	2	24
Miners' laborers, -----					1	1					2	1	5
Drivers and runners, -----									1	1		1	4
Doorboys and helpers, -----												1	1
Company men, -----	1				1					1			3
Totals, -----	2	2	2	2	2	3	4		3	7	4	4	35
Outside													
Slatepickers (boys), -----								1					1
All other employes, -----		2					1						3
Totals, -----		2					1	1					3
Grand totals inside and outside, --	2	4	2	2	2	3	5	1	3	7	4	4	39

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
Inside													
Miners, -----	2	1	5	3	3	1	1		2	2	2	1	23
Miners' laborers, -----	3	1	1				3	3		3	1	1	14
Drivers and runners, -----	1	3	1	1	1		1	1		1	1	1	12
Company men, -----				2	1	1			1				5
All other employes, -----		2					1				1		4
Totals, -----	6	6	7	6	5	2	3	4	6	3	7	3	58
Outside													
Slatepickers (boys), -----	1							1			1	1	4
Slatepickers (men), -----					1								1
All other employes, -----	1	2						2				1	6
Totals, -----	2	2			1			3			1	2	11
Grand totals inside and outside, --	8	8	7	6	6	2	3	7	6	3	8	5	69

TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
American, -----	1				1				1	2	1	2	8
Welsh, -----		2										1	4
Scottish, -----							1						1
Irish, -----									1	3			4
Polish, -----	1		1	1		2	1		1	1	2		10
Hungarian, -----		1				1						1	3
Italian, -----		1						1					3
Slavonian, -----							1						1
Lithuanian, -----			1	1	1		1						4
Austrian, -----							1						1
Totals, -----	2	4	2	2	2	3	5	1	3	7	4	4	39

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
American, -----	3	2	1	1	1		2	3			2		15
English, -----		1	1	2								1	5
Welsh, -----			2	1		1	1				2		8
Irish, -----	1					1			3			1	6
German, -----		1											1
Polish, -----	1	1	3	2	2			4	1	1	3	2	20
Hungarian, -----		1											1
Italian, -----		1											2
Slavonian, -----						1			1				2
Lithuanian, -----	1	1				2				2	1		7
Russian, -----			1						1				2
Totals, -----	8	8	7	6	6	2	3	7	6	3	8	5	69

TABLE I.—Operators and mines, kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents, and number of persons employed inside

Names of Operators and Mines	Kind of opening	Gaseous or non-gaseous	Method of ventilation	Diameter of fan in feet	Width of blades in feet	Depth of blades in feet	Number of revolutions per minute	Water gauge developed—in inches	Name of fan	Power used	Number of splits of air currents	Number of cubic feet of air per minute entering the mine at inlet	Total quantity of air per minute circulating in all the splits in cubic feet	Number of cubic feet per minute passing out at outlet	Number of persons employed inside
Delaware and Hudson Co.															
Marvine Colliery:															
Marvine, -----	Shaft, -----	Gaseous, -----	Fan, -----	20	5	5	64	1.2	Gubbal, -----	Steam, -----	6	222,100	202,340	242,400	300
Marvine, -----	Slope, -----	Gaseous, -----	Fan, -----	22	5	5	80	1.4	Gubbal, -----	Steam, -----	7	177,240	151,750	192,240	295
Legitts Creek Colliery:															
Legitts Creek No. 1, -----	Shaft, -----	Gaseous, -----	Fan, -----	20	5	6	75	2.6	Gubbal, -----	Steam, -----	2	49,620	43,210	54,500	140
Legitts Creek No. 2, -----	Shaft, -----	Gaseous, -----	Fan, -----	20	5	6	75	1.6	Gubbal, -----	Steam, -----	7	130,970	124,250	156,450	234
Legitts Creek No. 3, -----	Shaft, -----	Gaseous, -----	Fans, -----	22	6	6	90	1.4	Gubbal, -----	Steam, -----	7	177,400	150,600	199,300	274
Dickson, -----	Shaft, -----	Gaseous, -----	Fan, -----	20	6	5	76	1.6	Gubbal, -----	Steam, -----	12	311,300	265,000	308,000	496
Von Storch, -----	Slope, -----	Gaseous, -----	Fans, -----	22	5	5	85	2.2	Gubbal, -----	Steam, -----	8	100,350	156,030	173,940	512
Manville, -----	Shaft, -----	Gaseous, -----	Fan, -----	20	6	5.6	68	1.6	Gubbal, -----	Steam, -----	7	220,750	194,190	251,910	378
Delaware, Lackawanna and Western Railroad Co.															
Brisbin, -----	Shaft, -----	Gaseous, -----	Fan, -----	14	4	4	128	1.7			8	151,200	126,000	188,500	395
Cayuga, -----	Shaft, -----	Gaseous, -----	Fan, -----	12	3.5	4	148	1.3			10	129,426	116,514	144,642	382
Diamond Colliery:															
Diamond, -----	Shaft, -----	Gaseous, -----	Fan, -----	14	4	4	100	.5	Open run-	Steam, -----	8	80,966	62,336	174,482	153
Diamond, -----	Drift, -----	Non-gas, -----	Fan, -----	14	4	4	96	.9	ming.		4	35,175	25,350	42,400	146
Tripp, -----	Shaft, -----	Gaseous, -----	Fan, -----	16	5	6.5	104	.8			2	31,340	25,818	36,400	223
Tripp, -----	Slope, -----	Gaseous, -----	Fan, -----	14	4	4	104	.8			3	69,000	54,550	70,000	153

Seranton Coal Co. Pine Brook, -----	Shaft, -----	Gaseous, -	Fans, -----	{ 17 17 }	4 6	4 6	102	1.2	Guibal, ----	Steam, --	10	217,350	194,200	243,350	4
Mount Pleasant Colliery: Mount Pleasant (Main), -----	Shaft, -----	Gaseous, -	Fan, -----	20	5	5	60	.7	Guibal, ----	Steam, --	4	120,440	111,390	130,530	208
Mount Pleasant (Surface), -----	Shaft, -----	Non-gas.	Fan, -----	12	3	3	114	.9	Guibal, ----	Steam, --	3	41,900	33,450	43,000	108
West Ridge, -----	Slope, -----	Gaseous, -	Fan, -----	20	5	5	70	1.3				73,000	60,000	95,500	135
Price-Panocast Coal Co. Panocast, -----	Shaft, -----	Gaseous, -	Fans, -----	{ 35 20 }	9 4	8.5 5	54 72	2.2 1.75	Guibal, ----	Steam, --	{ 10 8 }	138,669 176,669	152,002 163,402	168,876 190,176	359 417
Pennsylvania Coal Co. No. 5 Shaft, -----	Shaft, -----	Gaseous, -	Fan, -----	20	6.5	5	75	1.2	Guibal, ----	Steam, --	7	144,865	95,375	167,285	215
Green Ridge Coal Co. Green Ridge, -----	Slope, -----	Gaseous, -	Fan, -----	14	4	4	48	2.5	Guibal, ----	Steam, --	7	116,520	101,110	128,620	148
A. D. and F. M. Spencer Spencer, -----	Shaft, -----	Non-gas.	Natural, -									*			
North End Coal Co. North End, -----	Tunnel, -----	Non-gas.	Natural, -									30,800	27,800	34,100	73
Carney and Brown Carney and Brown, -----	Shaft, -----	Non-gas.	Natural, -									26,579	19,917	25,781	56
Nay Aug Coal Co. Nay Aug No. 1, -----	Slope, -----	Non-gas.	Natural, -									*			
Nay Aug No. 2, -----	Drift, -----	Non-gas.	Natural, -									*			
Bull's Head Coal Co. Bull's Head, -----	Slope, -----	Non-gas.	Natural, -									40,000	15,000	40,000	38
Clearview Coal Co. Clearview, -----	Drift, -----	Non-gas.	Natural, -									*			
Mountain Lake Coal Co. Mountain Lake, -----	Drift, -----	Non-gas.	Natural, -									*			

*Variable but of sufficient quantity.

TABLE 1.—Operators, location of collieries, railroads, etc.

Names of Operators and Collieries	County	Name of General Superintendent	Post Office	Name of Superintendent	Post Office	Railroad to Mine
Delaware and Hudson Co. Marvine, ----- Legitts Creek, ----- Dickson, ----- Von Storch, ----- Manville, ----- Von Storch Washery, ----- Legitts Creek Washery, -----	Lackawanna, ---	C. C. Rose, -----	Seranton, -----	E. K. Pettebone,	Dorranctown, ---	D. and H.
Delaware, Lackawanna and Western Railroad Co. Brisbin, ----- Cayuga, ----- Diamond, ----- Manville, ----- Diamond Washery, ----- Cayuga Washery, -----	Lackawanna, ---	R. A. Phillips, -----	Seranton, -----	Walter Reese, -----	Seranton, -----	D., L. and W. D., L. and W. D., L. and H. D., L. and W. D., L. and W.
Seranton Coal Co. Pine Brook, ----- Mount Picasant, ----- West Ridge, -----	Lackawanna, ---	W. L. Allen, -----	Peckville, -----	{John J. Von Ber- gen, John F. Cum- mings.	Seranton, -----	O. and W.
Price-Patricoast Coal Co. Pancoast, ----- Pancoast Washery, -----	Lackawanna, ---	John R. Bryden, ---	Seranton, -----	Joseph V. Birdley,	Throop, -----	D., L. and W. and O. and W.
Pennsylvania Coal Co. No. 5 Shatt, -----	Lackawanna, ---	William W. Inglis,	Dunmore, -----	David Girvan, -----	Dunmore, -----	Erie
Green Ridge Coal Co. Green Ridge, -----	Lackawanna, ---	W. L. Connell, ---	Seranton, -----	-----	-----	Erie
A. D. and F. M. Spencer Spencer Washery, -----	Lackawanna, ---	F. M. Spencer, -----	Dunmore, -----	H. M. Spencer, -----	Dunmore, -----	D., L. and W. and Erie

North End Coal Co. North End, -----	Laekawanna, -----	W. L. Connell, -----	Scranton, -----	-----	-----	O. and W.
Economy Light, Heat and Power Co. Economy Washery, -----	Laekawanna, -----	L. H. Conklin, -----	Scranton, -----	R. Van O'linda, -----	Scranton, -----	-----
Carney and Brown Carney and Brown, -----	Laekawanna, -----	John Carney, -----	Dunmore, -----	Thomas Mullen, -----	Dunmore, -----	D., L. and W.
May Aug Coal Co. May Aug No. 1, ----- May Aug No. 2, -----	Laekawanna, -----	-----	-----	William Robertson, -----	Scranton, -----	Erie
Bull's Head Coal Co. Bull's Head, -----	Laekawanna, -----	David Spruks, -----	Scranton, -----	Jonathan Vipond, -----	Scranton, -----	-----
Clearview Coal Co. Clearview, -----	Laekawanna, -----	Louis B. Landau, -----	Scranton, -----	-----	-----	-----
Mountain Lake Coal Co. Mountain Lake, -----	Laekawanna, -----	Thomas F. Quinn, -----	Scranton, -----	Michael Quinn, -----	Scranton, -----	-----

TABLE 2.—Number of tons of coal mined, number of days worked, number of persons employed, number killed and injured, quantity of powder and dynamite used, etc.

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked	Number of employees	Number of fatal accidents	Number of non-fatal accidents	Number of kegs of powder used	Number of pounds of dynamite used	Number of horses and mules
Delaware and Hudson Co.												
Marvine,		256,670	33,598	3,260	283,528	259	809	1	8	15,946	10,890	75
Legitts Creek,		391,655	17,323	10,586	419,564	245	907	3	9	23,623	20,916	67
Dickson,	Lackawanna,	250,796	1,703	4,703	257,202	241	607	2	4	18,178	21,869	57
Von Storch,		239,521	2,453	3,318	245,292	207	675	3	3	12,089	17,712	71
Manville,		74,402	9,749	897	85,048	121	521	---	6	7,736	10,845	51
		1,213,044	64,826	22,764	1,300,634	---	3,519	9	30	77,572	82,232	321
Von Storch Washery,	Lackawanna	90,212	46,423	---	136,635	155	37	---	---	---	---	---
Legitts Creek Washery,		---	80,818	---	80,818	134	23	---	---	---	---	---
		90,212	127,241	---	217,453	---	60	---	---	---	---	---
Totals,		1,303,256	192,067	22,764	1,518,087	---	3,579	9	30	77,572	82,232	321
Delaware, Lackawanna and Western Railroad Co.												
Brisbin,		321,037	21,960	4,352	347,349	277	761	2	---	15,041	12,065	58
Cayuga,		189,221	10,939	5,537	215,697	215	617	1	6	9,446	19,825	54
Diamond,	Lackawanna,	562,828	9,347	668	272,843	189	774	2	8	13,496	8,864	98
Manville,		79,866	2,640	964	83,470	132	*	---	---	8,273	12,655	---
		862,552	44,886	11,521	919,359	---	2,152	5	14	46,256	53,469	210

*See D. and H. Co.

Diamond Washery,	182,672	3,000	185,672	292	60	1	16	59	3
Cayuga Washery,	65,503	5,469	70,972	285	16				
Totals,	248,175	8,469	256,644		76	1	16	59	3
Lackawanna,									
	1,111,127	53,355	1,176,003		2,228	5	46,272	53,468	213
Seranton Coal Co.									
Pine Brook,	408,129	26,500	439,190	209	952	4	23,900	23,800	97
Mount Pleasant,	184,949	24,500	212,155	157	542	6	13,080	8,800	63
West Ridge,	39,402	9,250	50,908	149	252	7	3,950	9,400	27
Totals,	632,480	60,250	701,953		1,746	10	41,830	42,000	187
Price-Panocoast Coal Co.									
Panocoast,	559,488	54,750	618,286	292	1,372	7	34,100	16,925	120
Panocoast Washery,	34,278		34,278	78	36				
Totals,	593,716	54,750	652,564		1,408	7	34,100	16,925	120
Pennsylvania Coal Co.									
No. 5 Shaft,	154,118	5,862	175,037	203	426	2	10,112	5,003	64
Green Ridge,	86,125	7,282	118,344	205	275	2	4,630	2,400	37
Spencer,	5,730		5,730	50	53	4	123	75	10
Spencer Washery,	72,239	3,500	75,739	166	54				3
Totals,	77,969	3,500	82,840		107	4	123	75	13
North End Coal Co.									
North End,	64,885	8,500	77,457	190	272	1	2,572	1,600	14
Economy Light, Heat and Power Co.									
Economy Washery,		60,000	60,000	200	18				
Carney and Brown,	36,950	1,460	48,846	216	97	1	792	800	20
Nay Aug No. 1,	21,785		21,785	97	160	2	585	1,850	10
Nay Aug No. 2,	5,777		13,705	149	56		297	950	9
Totals,	27,562		35,490		216	2	882	2,800	19

TABLE 2 Continued

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Number of kegs of powder used	Number of pounds of dynamite used	Number of horses and mules
Bull's Head, -----	Lackawanna, -----	9,212	1,000	10,994	21,206	179	84	1	1	850	725	15
Clearview, -----	Lackawanna, -----	2,488	-----	1,187	3,675	33	39	-----	-----	139	-----	2
Mountain Lake, -----	Lackawanna, -----	-----	-----	3,400	3,400	146	17	-----	-----	180	-----	2
Grand totals, -----	-----	4,099,888	448,026	126,988	4,674,902	-----	10,522	39	69	220,054	208,088	1,027

TABLE 2.—Part 2

Names of Operators	County	Number of Boilers				Locomotives			Total horse power	Number of steam engines of all classes	Total horse power	Number of pumps delivering water to surface	Capacity in gallons per minute	Quantity delivered to surface per minute—gallons	Number of electric dynamos	Number of air compressors
		Cylindrical	Horse power	Tubular	Horse power	Total horse power	Steam	Air									Electric
Delaware and Hudson Co., and Western Railroad Co.,		70	1,944	32	5,675	7,619	23	135	9,340	11	16,500	7,250	2	9		
Scranton Coal Co.,		12	180	20	5,100	5,100	4	11	4,026	17	11,089	6,984	1			
Price-Panocoast Coal Co.,		11	1,835	17	2,380	2,380	2	7	2,902	12	6,070	5,713	4	3		
Pennsylvania Coal Co.,				3	450	450			1,908	5	1,600	1,000	2	2		
Green Ridge Coal Co.,				3	375	375			450	2	784	252				
A. D. and F. M. Spence,				5	145	145			594	1	450	300	1			
North End Coal Co.,	Lackawanna,			2	300	445			200	9	225		1			
Economy Light, Heat and Power Co.,				5	500	500			225	4	500		1			
Carney and Brown,				3	250	250			100	3	500					
Nay Aug Coal Co.,				3	270	270			115	4	100					
Bull's Head Coal Co.,				3	225	225			131	1	100					
Clearview Coal Co.,*		3	52			52										
Mountain Lake Coal Co.,*																
Totals,		90	2,821	101	17,180	19,501	6	23	299	20,151	50	37,603	21,561	12	13	

*Power supplied by another company.

TABLE 3.—Number of employees inside and outside of mines

Names of Operators and Colleries	County	Inside										Outside										Grand total inside and outside	
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Doorboys and helpers	Pumpmen	Company men	All other employees	Total inside	Superintendents	Foremen	Blacksmiths and carpenters	Engineers and firemen	Slate pickers (boys)	Slate pickers (men)	Bookkeepers and clerks	All other employees	Total outside		
Delaware and Hudson Co. Marvine, ----- Legitts Creek, ----- Dickson, ----- Von Storch, ----- Manville, -----	Lackawanna, -----	2	8	204	193	118	17	4	95	26	667	---	1	8	24	27	19	3	60	142	809		
		2	7	262	238	73	14	6	90	35	727	---	1	10	30	31	16	3	83	180	907		
		1	5	162	170	71	12	2	77	13	515	---	1	8	16	12	7	3	45	92	607		
		1	6	188	158	91	15	1	74	9	544	---	1	11	23	31	12	3	50	131	675		
		1	5	143	165	63	10	2	34	9	432	---	1	5	15	4	25	2	37	89	521		
Von Storch Washery, Legitts Creek Washery, -----	Lackawanna, -----	7	3	959	924	416	68	15	370	92	2,885	---	1	1	1	1	114	105	79	14	275	634	3,519
		---	---	---	---	---	---	---	---	---	---	---	---	1	1	1	2	3	---	30	37	37	---
Totals, -----		7	31	959	924	416	68	15	370	92	2,885	---	7	42	116	107	82	14	326	694	3,579		
Delaware, Lackawanna and Western Railroad Co. Brisbin, ----- Cayuga, ----- Diamond, ----- Manville,* -----	Lackawanna, -----	2	4	168	236	69	20	3	---	103	635	---	1	7	10	43	---	3	62	126	761		
		1	4	162	147	72	10	2	120	519	519	---	1	6	9	31	---	3	48	98	617		
		3	6	195	195	75	15	8	44	59	600	---	2	9	15	40	17	3	88	174	774		
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
		6	14	555	578	216	45	13	164	162	1,754	---	4	22	34	114	17	9	198	398	2,152		

*See Delaware and Hudson Co., opposite Manville.

Diamond Washery,	1	1								7	1	1	2	6	3	2	38	60
Oayuga Washery,												1	4	1			11	16
	1	1								7	1	1	2	10	4	2	49	69
Totals,	7	14	556	578	216	45	13	169	162	1,701	1	5	24	44	118	17	247	467
Seranton Coal Co.																		
Pine Brook,	1	2	240	225	177	14	6	20	65	756	1	1	11	11	60	46	64	196
Mount Pleasant,	2	3	130	117	133	22	7	7	65	409	1	1	7	12	45	21	44	133
West Ridge,	1	2	71	46	28	4	2		32	186	1	1	4	4	22	7	26	66
Totals,	4	2	11	441	388	40	15	20	162	1,351	3	3	22	27	127	74	5	134
Price-Panocoast Coal Co.																		
Panocoast,	2	3	7	338	367	68	8	45	143	1,129	1	1	11	20	61	37	4	108
Panocoast Washery,																		
Totals,	2	3	7	338	367	68	8	45	143	1,129	1	2	13	21	61	41	4	136
Pennsylvania Coal Co.																		
No. 5 Shaft,	1	2	1	112	120	56	9	1	20	24	346	1	4	5	20	21	2	37
Green Ridge Coal Co.																		
Green Ridge,	2	1	65	64	45	5	1	7	6	196	1	1	5	5	17	3	47	79
A. D. and F. M. Spencer																		
Spencer,	1		10	10	7					32	1	1	2	5	2	1	9	21
Spencer Washery,																		
Totals,	1		10	10	7				4		1	1	6	7			39	54
North End Coal Co.																		
North End,	1	2	48	47	17	2	2	2	76	195	1	1	4	8	23	5	2	33
Economy Light, Heat and																		
Power Co.																		
Economy Washery,																		
Carney and Brown																		
Carney and Brown,	1		16	18	12			15		62	1	1	2	2	13		1	15
Nay Aug Coal Co.																		
Nay Aug No. 1,	1	1	38	38	22			8	8	116	1	1	4	1	20	2	13	44
Nay Aug No. 2,			19	22	4			1		46					6	1	2	10
Totals,	1	1	57	60	26			9	8	162	1	1	4	1	26	3	15	54

Nay Aug No. 1,

Nay Aug No. 2,

TABLE 3—Continued

Names of Operators and Collieries	County	Inside											Outside							Grand total inside and outside			
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Doorboys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Foremen	Blacksmiths and carpenters	Engineers and firemen	Slate pickers (boys)	Slate pickers (men)	Bookkeepers and clerks		All other employes	Total outside	
Bull's Head Coal Co. Bull's Head, -----	Lackawanna, -----	1	12	20	20	12				6					1	2	2	8	4	1	6	25	84
Clearview Coal Co. Clearview, -----	Lackawanna, -----	1	2	7	12	2									1	1		6	4	5	17	39	
Mountain Lake Coal Co. Mountain Lake, -----	Lackawanna, -----	1	2	3	3	2									1	1	1	4	1	1	8	17	
Grand totals, -----	-----	30	12	67	2,632	2,611	1,227	237	53	667	673	8,209	14	28	123	243	542	250	53	1,040	2,313	10,592	

TABLE 3.—Part 2

Names of Operators and Collieries	County	Number of Days Worked in Breaker												Total		
		January	February	March	April	May	June	July	August	September	October	November	December			
Delaware and Hudson Co.																
Marvine, -----		25	23	24	24	20	20	15	20	21	22	22	22	23	23	259
Lecitts Creek, -----	Lackawanna, -----	21	21	22	22	18	19	18	18	20	20	20	20	23	23	245
Dickson, -----		25	22	22	22	19	20	18	9	20	22	21	21	21	241	
Von Storch, -----		21	18	18	18	15	16	14	16	18	19	17	17	17	207	
Manville, -----		23		20	18		18			20		22			121	
Delaware, Lackawanna and Western Railroad Co.																
Brisbon, -----	Lackawanna, -----	25	21	25	24	24	25	24	16	23	24	22	24	24	277	
Cayuga, -----		30	19	11	18	19	20	20	18	13	19	18	18	20	215	
Diamond, -----		24	7		19	21	14	10	14	17	22	21	20	20	189	
Manville, -----		22	22		22		24		22		18		24		132	
Scranton Coal Co.																
Pine Brook, -----		20	18	17	18	18	17	17	18	16	15	17	18	18	209	
Mount Pleasant, -----	Lackawanna, -----	16	15	15	14	9	13	13	12	12	13	12	13	13	157	
West Ridge, -----		13	13	12	13	13	14	12	12	12	12	11	12	12	149	
Price-Pancoast Coal Co.																
Pancoast, -----	Lackawanna, -----	23	22	23	21	20	22	23	21	22	23	21	21	21	262	
Pennsylvania Coal Co.																
No. 5 Shaft, -----	Lackawanna, -----	15	14	16	16	17	17	14	16	16	22	21	19	19	203	
Green Ridge Coal Co.																
Green Ridge, -----	Lackawanna, -----	18	19	19	16	17	18	14	15	16	18	17	18	18	205	
A. D. and F. M. Spencer																
Spencer, -----	Lackawanna, -----	9	4	3					8			13	13	13	50	

TABLE 3—Part 2—Continued

Number of Days Worked in Breaker

Names of Operators and Collieries	County	Number of Days Worked in Breaker												Total		
		January	February	March	April	May	June	July	August	September	October	November	December			
North End, -----	Lackawanna, -----	22	20	21	18	14	12	13	14	13	14	14	14	15	15	190
Carney and Brown, -----	Lackawanna, -----	20	19	19	19	14	21	19	13	16	21	16	19	19	216	216
Nay Aug No. 1, -----	Lackawanna, -----	21	24	25	24	4	6	10	12	11	15	16	15	12	19	97
Nay Aug No. 2, -----																	2	8	10	12	19	149
Bull's Head, -----	Lackawanna, -----	20	16	15	12	10	11	17	15	15	16	16	16	16	179	179
Clearview, -----	Lackawanna, -----													13	20	33
Mountain Lake, -----	Lackawanna, -----	20	18	22	14				6	15	15	15	17	19	19	146

TABLE 4.—Fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Mine	County	Nature and Cause of Accident in Brief
Jan. 18	William Brown, -----	Polish, -----	Miner, -----	35	S.	---	---	Mount Pleasant, -----	Lackawanna,	Fatally injured by explosion of powder.
29	John Doyle, -----	American, -----	Tracklayer, -----	28	S.	---	---	Mount Pleasant, -----		Fatally injured by fall of roof at branch of chamber.
Feb. 1	Alfonso Auchlo, -----	Italian, -----	Laborer, -----	30	S.	---	---	Diamond, -----	---	Instantly killed in a conveyor line. Outside.
4	William G. Brooks, -----	Welsh, -----	Laborer, -----	36	M.	1	1	Legitts Creek, -----	---	Killed by railroad cars. Outside.
5	David J. Williams, -----	Welsh, -----	Miner, -----	50	W.	---	---	Diamond shaft, -----	---	Instantly killed by fall of roof at face of chamber.
8	John Micholoff, -----	Hungarian, -----	Miner, -----	46	M.	1	---	Pancoast, -----	---	Killed by fall of roof at face of chamber in Diamond vein.
Mar. 3	John Jerkman, -----	Lithuanian, -----	Miner, -----	27	S.	---	---	Brisbin, -----	---	Instantly killed. Fell from ascending cage into shaft.
18	George Shadock, -----	Polish, -----	Miner, -----	33	M.	1	4	Pine Brook, -----	---	Instantly killed by flying coal from blast.
April 16	William Rijuscus, -----	Lithuanian, -----	Miner, -----	32	M.	1	4	Dickson, -----	---	Instantly killed by blast.
29	Adam Bell, -----	Polish, -----	Miner, -----	27	S.	---	---	Von Storch, -----	---	Instantly killed by blast.
May 21	Thomas Llewellyn, -----	American, -----	Company man, -----	27	M.	1	2	Legitts Creek, -----	---	Killed while assisting to replace a derailed mine car.
29	Peter Yetkno, -----	Lithuanian, -----	Laborer, -----	25	S.	---	---	Mount Pleasant, -----	Lackawanna,	Accidentally killed by fall of roof at face.
20	Joseph Takacs, -----	Hungarian, -----	Miner, -----	23	S.	---	---	Pancoast, -----		Instantly killed by blast.
June 24	Bolak Visavatha, -----	Polish, -----	Miner, -----	28	S.	---	---	Pancoast, -----	---	Killed by fall of roof at face of chamber.
26	Charles Seklinus, -----	Polish, -----	Laborer, -----	18	S.	---	---	Von Storch, -----	---	Killed by fall of roof near face.
July 6	John Trosky, -----	Austrian, -----	Loader, -----	40	M.	1	4	Pine Brook, -----	---	Accidentally killed by railroad cars. Outside.
21	Mike Colobar, -----	Slavonian, -----	Miner, -----	25	M.	1	3	Green Ridge, -----	---	Killed by fall of roof in No. 2 vein.
21	Samuel Edmerson, -----	Scottish, -----	Miner, -----	45	M.	1	1	Green Ridge, -----	---	Killed by fall of roof thirty feet from face.
25	Julius Goushofaki, -----	Polish, -----	Miner, -----	50	M.	1	4	Cayuga, -----	---	Instantly killed by fall of roof at face of Rock vein.
25	James Terna, -----	Lithuanian, -----	Miner, -----	33	M.	1	---	Brisbin, -----	---	Fatally injured in conveyor line. Outside.
Aug. 8	Nicholas Gentle, -----	Italian, -----	Slatepicker, -----	14	S.	---	---	Nay Aug, -----	---	---

TABLE 4.—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Mine	County	Nature and Cause of Accident in Brief
Sept. 1	William G. Gaskell, ---	American, ---	Miner, ---	49	M. ---	1	1	Pancoast, ---		Fatally injured by flying coal from blast.
9	John Murtaugh, ---	Irish, ---	Doorman, ---	65	M. ---	1	---	Legitts Creek, ---		Killed by runaway trip of mine cars.
15	John Bousaski, ---	Polish, ---	Miner, ---	47	M. ---	1	---	Mount Pleasant, ---		Killed by fall of roof at face of chamber in Big vein.
Oct. 3	John Brasyaski, ---	Polish, ---	Miner, ---	32	S. ---	---	---	Von Storch, ---		Instantly killed by blast at face.
13	James Henningan, ---	Irish, ---	Miner, ---	48	M. ---	1	6	Nay Aug, ---		Fatally injured by fall of roof at face.
15	John Garvey, ---	Irish, ---	Miner, ---	37	S. ---	---	---	Mount Pleasant, ---		Fatally injured by blast at face in China vein.
19	Frank Farrell, ---	Irish, ---	Miner, ---	50	M. ---	1	---	Marvine, ---		Instantly killed by fall of roof at face in Clark vein.
26	H. Williams, ---	Welsh, ---	Miner, ---	28	M. ---	1	2	Mount Pleasant, ---		Fatally injured by blast in China vein.
26	Adam Jacobs, ---	American, ---	Company man, ---	19	S. ---	---	---	Dickson, ---		Fatally injured by cars in Dunmore No. 4 vein.
Nov. 31	William Loughney, ---	American, ---	Doorboy, ---	17	S. ---	---	---	No. 5 Shaft, ---		Fatally injured by cars.
2	Stefana Sorbetta, ---	Italian, ---	Laborer, ---	21	S. ---	---	---	No. 5 Shaft, ---		Instantly killed. Fell from ascending cage into shaft.
4	John Miller, ---	Polish, ---	Laborer, ---	24	S. ---	---	---	North End, ---	Lackawanna, ---	Instantly killed by fall of roof at face of gangway in Roek vein.
9	Joe Bakanaski, ---	Polish, ---	Miner, ---	37	M. ---	1	2	Pancoast, ---		Killed by fall of roof at face of chamber in Clark vein while preparing to set props. They should have taken down the loose roof.
9	William Reese, ---	American, ---	Miner, ---	39	M. ---	1	2	Pancoast, ---		Instantly killed by fall of roof at face of gangway in Clark vein.
Dec. 1	Hugh James, ---	Welsh, ---	Miner, ---	60	M. ---	1	---	Pine Brook, ---		Killed by fall of roof of rock at face of chamber in Diamond vein.
2	Andrew Myers, ---	American, ---	Miner, ---	52	M. ---	1	---	Bull's Head, ---		Fatally injured by cars.
12	Sherman Spanburg, ---	American, ---	Driver, ---	17	S. ---	---	---	Pine Brook, ---		Killed by fall of roof at face of chamber in Diamond vein.
30	Laslo Ovarlo, ---	Hungarian, ---	Laborer, ---	42	S. ---	---	---	Pancoast, ---		

NOTE.—Martin Foley, 21 years of age, died at Brislin mine, July 13. Alex. Roek, 21 years of age, unemployed, was killed in Marvine mine, August 28. John Lynott, 62 years of age, died in Von Storch engine house, October 5.

TABLE 5.—Non-fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Mine	County	Nature and Cause of Accident in Brief
Jan. 2	George Andrews, -----	American, ---	Miner, -----	26	M.	Legitts Creek, -----		Injured by flying coal from blast.
3	John Ross, -----	Italian, -----	Slatepicker, -----	14	S.	Legitts Creek, -----		Foot injured by falling. Outside.
6	Howard Brady, -----	American, ---	Laborer, -----	20	S.	Spencer, -----		Leg fractured. Fell under moving mine cars. Outside.
8	John Kelly, -----	Irish, -----	Laborer, -----	38	M.	Carney and Brown, -----		Leg fractured by fall of roof.
10	Leonard Romanovgn, -----	Hungarian, ---	Laborer, -----	27	S.	Spencer, -----		Leg fractured by cars.
22	Joseph Skise, -----	Lithuanian, ---	Miner, -----	40	M.	Diamond Shaft, -----		Left leg crushed by cars.
24	Lewis Drisco, -----	Polish, -----	Laborer, -----	22	M.	Bull's Head, -----		Injured by fall of roof rock.
25	Cyrl Lynott, -----	American, ---	Driver, -----	17	S.	Marvine, -----		Arm fractured by mine cars.
Feb. 1	James Tarry, -----	Italian, -----	Company man, -----	45	M.	West Ridge, -----		Arm injured in breaker machinery. Outside.
5	Harry Zebak, -----	Russian, -----	Laborer, -----	38	M.	Manville, -----		Arm injured while unloading props. Outside.
5	John Leeski, -----	Lithuanian, ---	Tracklayer, -----	25	S.	Marvine, -----		Arm fractured by piece of lee that fell down shaft.
5	Charles Oliver, -----	American, ---	Runner, -----	27	M.	Manville, -----		Arm fractured by cars.
6	Benjamin Atkinson, -----	English, -----	Footman, -----	22	S.	Dickson, -----	Lackawanna, ---	Arm fractured by piece of lee that fell down shaft.
18	John Shoebosk, -----	German, -----	Miner, -----	45	M.	West Ridge, -----		Arm fractured by fall of roof.
26	William Meskye, -----	Polish, -----	Driver, -----	17	S.	Mount Pleasant, -----		Injured by cars.
27	John Pritchard, -----	American, ---	Runner, -----	23	S.	Legitts Creek, -----		Finger injured by cars.
Mar. 9	William Lewis, -----	English, -----	Miner, -----	37	S.	Diamond Drift, -----		Leg fractured by fall of roof.
11	George Cuyshuniski, -----	Polish, -----	Miner, -----	41	M.	Cayuga, -----		Leg fractured by fall of roof.
13	Charles Krusconski, -----	Polish, -----	Laborer, -----	17	S.	Legitts Creek, -----		Injured by fall of roof.
13	Thomas George, -----	Welsh, -----	Miner, -----	42	M.	West Ridge, -----		Back injured by fall of roof rock.
16	Jacob Ballet, -----	Polish, -----	Miner, -----	34	M.	Mount Pleasant, -----		Leg broken by cars.
19	Thomas Watkins, -----	Welsh, -----	Runner, -----	25	M.	Marvine, -----		Hand crushed by fall of roof rock.
21	Thomas Myers, -----	American, ---	Miner, -----	35	M.	Marvine, -----		Injured by mine.
April 4	John Pringie, -----	English, -----	Company man, -----	58	M.	Marvine, -----		Leg fractured by flying coal from blast.
4	Luke Evans, -----	Welsh, -----	Miner, -----	58	M.	Cayuga, -----		Leg fractured by fall of roof.
13	Joe Sleddeckle, -----	Polish, -----	Miner, -----	46	M.	Mount Pleasant, -----		Leg fractured by fall of roof.

TABLE 5.—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Mine	County	Nature and Cause of Accident in Brief
April 24	Boyd Armstrong, ---	American, ---	Driver, ---	21	S.	West Ridge, ---	Lackawanna, ---	Leg injured between car and prop.
25	Joseph Miller, ---	Polish, ---	Miner, ---	63	M.	North End, ---		Arm fractured by flying coal from blast.
28	Hegkiah Coates, ---	English, ---	Company man, ---	23	S.	Dickson, ---		Kicked by mule.
May 2	Joseph Bierce, ---	Lithuanian, ---	Slatepicker, ---	38	S.	Diamond Breaker, ---		Fell on sheet-iron and broke his arm. Outside.
9	Sam Shaffer, ---	American, ---	Company man, ---	28	S.	West Ridge, ---		Leg injured. Fell under moving car.
11	John Jakes, ---	Polish, ---	Miner, ---	42	M.	North End, ---		Injured by fall of roof.
12	Felix Rudolfski, ---	Polish, ---	Miner, ---	33	S.	Pancoast, ---		Injured by flying coal from blast.
25	Charles Jacobs, ---	Lithuanian, ---	Runner, ---	30	S.	Dickson, ---		Leg fractured by ears.
26	George Kurisko, ---	Lithuanian, ---	Miner, ---	30	M.	Marville, ---		Leg fractured by fall of roof rock.
June 2	Evan Jones, ---	Welsh, ---	Company man, ---	41	S.	Diamond Drift, ---		Injured by fall of roof rock.
26	Edward Welsh, ---	Irish, ---	Miner, ---	49	M.	Von Storch, ---		Seriously injured by mine ears.
July 2	William Davies, ---	Welsh, ---	Driver, ---	19	S.	Diamond Drift, ---		Collar bone broken by fall of roof rock.
8	William Hanners, ---	American, ---	Miner, ---	46	M.	Marvine, ---		Foot injured by cars.
11	Harry Schables, ---	American, ---	Brakeman, ---	16	S.	Legitts Creek, ---		Injured by flying coal from blast.
Aug. 1	Andrew Dranowski, ---	Polish, ---	Laborer, ---	30	M.	Pancoast, ---		Injured by fall of roof at face.
1	Mike Rozach, ---	Polish, ---	Slatepicker, ---	17	S.	Diamond Washery, ---		Injured by machinery. Outside.
5	John Nowoski, ---	Polish, ---	Laborer, ---	30	S.	Spencer, ---		Leg fractured by fall of roof rock.
12	Leo Calorice, ---	American, ---	Laborer, ---	16	S.	Legitts Creek, ---		Seriously injured by mine ears.
21	Mike Korman, ---	American, ---	Runner, ---	19	S.	Pancoast, ---		Foot injured by fall of roof rock.
24	Michael Badak, ---	Polish, ---	Laborer, ---	22	M.	Von Storch, ---		Fell, injuring his knee. Outside.
24	John Gray, ---	American, ---	Laborer, ---	26	M.	Nay Aug, ---	Injured by fall of roof at face.	
Sept. 4	Stanley Lashofski, ---	Polish, ---	Miner, ---	30	M.	Dickson, ---	Injured by machinery. Outside.	
4	John Rooney, ---	Irish, ---	Laborer, ---	45	S.	Nay Aug, ---	Leg fractured by mine cars.	
18	Thomas Welsh, ---	Irish, ---	Company man, ---	34	M.	Diamond, ---	Knee cap injured by fall of roof rock.	
28	Edward Herti, ---	Irish, ---	Laborer, ---	27	M.	Diamond, ---	Bruised by rolling prop. Outside.	
30	John Mowschurich, ---	Russian, ---	Laborer, ---	23	S.	Manville, ---	Seriously injured by flying coal from blast.	
30	John Kudanish, ---	Slavonian, ---	Miner, ---	27	S.	Nay Aug, ---	Foot injured by fall of roof.	
2	Grancy Miller, ---	Polish, ---	Miner, ---	41	F.	West Ridge, ---	Leg fractured by fall of roof.	
9	Mathias Wilkes, ---	Lithuanian, ---	Miner, ---	28	M.	Marvine, ---	Leg fractured by fall of roof.	
26	Stanley Yankdovize, ---	Lithuanian, ---	Driver, ---	20	M.	West Ridge, ---	Injured by fall of roof at face.	
								Slightly injured by fall of roof.
								Hand blown off by premature blast.
								Slightly injured by cars.

Nov.	7	John Zydonus,	Polish,	Laborer,	25	S.	Cayuga,	Injured by blast.
	12	George Stanko,	Polish,	Laborer,	48	S.	Spencer,	Leg fractured by fall of roof.
	13	David Evans,	Welsh,	Machinist,	53	M.	Diamond Shaft,	Foot injured by fall of roof.
	23	John Jackes,	American,	Slatepicker,	15	S.	Von Storch,	Injured by machinery. Outside.
	27	John Jorsak,	Polish,	Laborer,	21	S.	Legitts Creek,	Leg fractured by fall of roof.
	27	Martin Kaska,	Lithuanian,	Miner,	40	M.	Manville,	Injured by flying coal from blast.
	30	Daniel Jones,	Welsh,	Miner,	55	M.	Cayuga,	Injured by fall of roof in Four Foot vein.
	30	William Heffron,	American,	Driver,	17	S.	Pine Brook,	Injured by mine cars.
Dec.	7	John Paff,	Polish,	Driver,	21	S.	Cayuga,	Injured by falling under moving cars.
	7	John Mertha,	Irish,	Slatepicker,	17	S.	Cayuga,	Injured by machinery. Outside.
	8	David A. Jones,	Welsh,	Miner,	55	S.	Marvine,	Elbow fractured by fall of rock.
	16	Peter Postnok,	Polish,	Laborer,	20	M.	Marvine,	Leg fractured by fall of roof.
	28	William Johnson,	English,	Ashman,	40	M.	Legitts Creek,	Leg injured by cars. Outside.

Lackawanna,---

CONDITION OF COLLIERIES

DELAWARE AND HUDSON COMPANY

Marvine Shaft and Slope.—Ventilation, roads and drainage good. Condition as to safety good.

Legitts Creek Nos. 1, 2 and 3.— Ventilation, roads and drainage good. Condition as to safety good.

Dickson.—Ventilation, roads and drainage good. Condition as to safety good.

Von Storch.—Ventilation, roads and drainage good. Condition as to safety good.

DELAWARE, LACKAWANNA AND WESTERN RAILROAD COMPANY

Brisbin.—Ventilation, roads and drainage good. Condition as to safety good.

Cayuga.—Ventilation, roads and drainage good. Condition as to safety good.

Diamond Shaft.—Ventilation, roads and drainage good. Condition as to safety good.

Diamond Drift.—Ventilation, roads and drainage good. Condition as to safety good.

Tripp Shaft.—Ventilation, roads and drainage good. Condition as to safety good.

Tripp Slope.—Ventilation, roads and drainage good. Condition as to safety good.

SCRANTON COAL COMPANY

Pine Brook.—Ventilation, roads and drainage good. Condition as to safety good.

Mount Pleasant (Main).—Ventilation, roads and drainage good. Condition as to safety good.

Mount Pleasant (Surface).—Ventilation, roads and drainage good. Condition as to safety good.

West Ridge.—Ventilation, roads and drainage good. Condition as to safety good.

PRICE-PANCOAST COAL COMPANY

Pancoast.—Ventilation, roads and drainage good. Condition as to safety good.

PENNSYLVANIA COAL COMPANY

No. 5 Shaft.—Ventilation, roads and drainage good. Condition as to safety good.

GREEN RIDGE COAL COMPANY

Green Ridge.—Ventilation, roads and drainage good. Condition as to safety good.

A. D. AND F. M. SPENCER

Spencer.—Ventilation, roads and drainage good. Condition as to safety good.

NORTH END COAL COMPANY

North End.—Ventilation, roads and drainage good. Condition as to safety good.

The remaining companies whose workings are in surface veins have good ventilation. The drainage, however, depends largely on the season, as surface water finds its way into the workings in the wet season. Condition as to safety good.

 IMPROVEMENTS

DELAWARE AND HUDSON COMPANY

The rope haulage system of the Von Storch mine was extended 2,400 feet in the Rock vein.

PENNSYLVANIA COAL COMPANY

No. 5 Shaft, Outside.—A 36 x 46 foot brick building that was started in 1907, has been completed. This building contains one 20 x 21 inch engine with a continuous current generator 240 K. W., to be used for electric haulage inside. A brick building, 21 x 36 feet, to be used as shaft engine house, has been completed.

No. 5 Shaft, Inside.—A 7 x 10 foot rock plane has been driven from Clark vein through fault to 2nd Dummore vein, a distance of 985 feet.

 MINE FOREMEN'S EXAMINATIONS

The annual examination of applicants for certificates of qualification as mine foremen and assistant mine foremen was held in City Hall, Scranton, May 12 and 13. The Board of Examiners was composed of the following members: H. O. Prytherch, Inspector, Scranton; John Corcoran, Superintendent, Rendham; James W. Reese, Miner, Scranton and William Jenkins, Miner, Scranton.

The following persons passed a successful examination and were granted certificates.

Mine Foremen

John J. James, Harry Baston, Benjamin M. Jennings, Martin Corcoran, David J. Matthews, William J. Townsend, Henry Conway, Frank H. Doud, William Davey, Thomas Abraham.

Assistant Mine Foremen

David R. Gibbs, Olaf Anderson, Henry Edwards, James Leyshon, Charles Bartosch, Thomas J. Edwards, Thomas D. Maschal, Edward Widden, David Lodwick, James E. Griffiths, John Hopkins, Christopher F. Robertson.



Fourth District

LACKAWANNA COUNTY

Scranton, Pa., March 2, 1909.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor to transmit herewith my report as Inspector of Mines of the Fourth Anthracite District for the year ending December 31, 1908.

Respectfully submitted,

D. T. WILLIAMS,
Inspector.

SUMMARY OF STATISTICS

Number of collieries,	13
Number of mines,	30
Number of mines in operation,	30
Number of tons of coal shipped to market,	3,992,288
Number of tons used at mines for steam and heat,	136,062
Number of tons sold to local trade and used by employes,..	149,025
Number of tons produced,	4,277,375
Number of tons produced by compressed air machines, ..	.....
Number of tons produced by electrical machines, .....	.....
Number of persons employed inside of mines,	6,516
Number of persons employed outside,	1,915
Number of fatal accidents inside of mines,	31
Number of fatal accidents outside,	2
Number of non-fatal accidents inside of mines,	42
Number of non-fatal accidents outside,	1
Number of tons of coal produced per fatal accident inside,	137,979
Number of persons employed per fatal accident inside,..	210
Number of persons employed per fatal accident outside,..	958
Number of persons employed per non-fatal accident inside,	155
Number of persons employed per non-fatal accident out- side,	1,915
Number of wives made widows,	20
Number of children orphaned,	49
Number of steam locomotives used outside,	10
Number of electric motors used inside,	59
Number of fans in use,	23
Number of gaseous mines in operation,	16
Number of non-gaseous mines in operation,	14
Number of new mines opened,	2

TABLE A

PRODUCTION OF COAL

Names of Operators	Tons
Delaware, Lackawanna and Western Railroad Company, ..	3,511,482
Delaware and Hudson Company,	263,862
Seranton Coal Company,	240,593
Peoples Coal Company,	196,837
Marian Coal Company,	58,744
Minooka Coal Company,	5,857
	<hr/>
Total,	<u>4,277,375</u>

Production by Counties

Lackawanna,	<u>4,277,375</u>
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TABLE B.—Fatal and non-fatal accidents inside and outside of mines; number of tons of coal produced per accident; number of persons employed; number employed per accident

Names of Operators	Fatal Accidents			Non-fatal Accidents			Total	Tons of coal produced per fatal accident inside	Tons of coal produced per non-fatal accident inside	Number of employees inside	Number of employees outside	Total number of employees	Number of employees inside per fatal accident	Number of employees outside per fatal accident	Number of employees inside per non-fatal accident	Number of employees outside per non-fatal accident
	Inside	Outside	Total	Inside	Outside	Total										
	23	2	25	31	1	31										
Delaware, Lackawanna and Western Railroad Co.,	3		8	4		4	152,673	113,274	5,016	1,342	6,358	218	671	162		
Delaware and Hudson Co.,							87,954	65,965	695	252	947	232		174	252	
Scranton Coal Co.,				5		5		48,119	501	166	667	59		100		
Peoples Coal Co.,	5		5	2		2	39,367	98,418	294	122	416	59		147		
Miscellaneous companies,									10	33	43					
Totals and averages for district,	31	2	33	42	1	43	137,979	101,842	5,516	1,915	8,431	210	958	155		

TABLE C.—Classification of Fatal Accidents Inside and Outside of Mines

	Months												Totals	Percentages	
	January	February	March	April	May	June	July	August	September	October	November	December			
Causes of Accidents Inside															
Falls of coal, -----				1										1	3.23
Falls of slate, -----								1						1	3.23
Falls of roof, -----		2	1	1	1	2	1	2	1	1	1	1	1	14	45.16
Mine cars, -----		1			1				1	1				4	12.90
Explosions of gas and dust, -----								2			1			3	9.68
Premature blasts, -----	1			1	1		1					1		6	19.35
Miscellaneous, -----	1													2	6.45
Totals, -----	2	3	1	3	4	2	2	5	2	3	2	2		31	100.00
Causes of Accidents Outside															
Electricity, -----				1										1	50.00
Miscellaneous, -----														1	50.00
Totals, -----			1	1										2	100.00
Grand totals inside and outside, -----	2	3	2	4	4	2	2	5	2	3	2	2		33	

TABLE D.—Classification of Non-fatal Accidents Inside and Outside of Mines

	Months												Totals	Percentages	
	January	February	March	April	May	June	July	August	September	October	November	December			
Causes of Accidents Inside															
Falls of coal, -----						2	1							3	7.14
Falls of slate, -----			1											1	2.38
Falls of roof, -----			2				1	1	5	2	1	1	1	12	28.57
Mine cars, -----	1	2	3		1		2		1				1	11	26.19
Premature blasts, -----			1			2		1	1					6	14.29
Mules, -----													1	1	2.38
Miscellaneous, -----						3	1						4	8	19.05
Totals, -----	1	2	7		1	7	5	1	2	6	2	8	42	100.00	
Causes of Accidents Outside															
Cars, -----								1						1	100.00
Totals, -----								1						1	100.00
Grand totals inside and outside, -----	1	2	7		1	7	5	2	2	6	2	8	43		

TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
Inside													
Fire bosses and assistants, -----										1			1
Miners, -----	1			2		1	1	3		1			11
Miners' laborers, -----	1	2	1	1	2	1	1	2	1		2		14
Drivers and runners, -----		1											1
Company men, -----					1								1
All other employes, -----					1				1	1			3
Totals, -----	2	3	1	3	4	2	2	5	2	3	2	2	31
Outside													
Blacksmiths and carpenters, -----				1									1
Slatepickers (boys), -----													1
Totals, -----			1	1									2
Grand totals inside and outside, --	2	3	2	4	4	2	2	5	2	3	2	2	33

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
Inside													
Fire bosses and assistants, -----									1				1
Miners, -----	1		2			3	2	1	1	3	1	1	15
Miners' laborers, -----			2		1	3	1			2	1	1	11
Drivers and runners, -----		1	1				2					1	5
Company men, -----			1										1
All other employes, -----		1	1			1				1		5	9
Totals, -----	1	2	7		1	7	5	1	2	6	2	8	42
Outside													
All other employes, -----								1					1
Totals, -----								1					1
Grand totals inside and outside, --	1	2	7		1	7	5	2	2	6	2	8	43

TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
American, -----		1				1			1	2			1
English, -----								1					1
Welsh, -----													1
Irish, -----		1		1	2						1		5
German, -----						1		2					4
Polish, -----	2		1	2	2		1	1	1		1	1	12
Italian, -----			1				1						2
Lithuanian, -----								1		1			2
Russian, -----		1										1	2
Totals, -----	2	3	2	4	4	2	2	5	2	3	2	2	33

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
American, -----		2	2			1		1		1		5	12
Welsh, -----			2			1							3
Irish, -----						1	2		2	1			6
Polish, -----	1		3		1	4	2			2	2	3	18
Italian, -----							1						1
Slavonian, -----						1							1
Lithuanian, -----									1				1
Austrian, -----									1				1
Totals, -----	1	2	7		1	7	5	2	2	6	2	8	43

TABLE I.—Operators and mines, kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents, and number of persons employed inside

Names of Operators and Mines	Kind of opening	Gaseous or non-gaseous	Method of ventilation	Diameter of fan in feet	Width of blades in feet	Depth of blades in feet	Number of revolutions per minute	Water range developed—in inches	Name of fan	Power used	Number of splits of air currents	Number of cubic feet of air per minute entering the mine at inlet	Total quantity of air per minute circulating in all the splits in cubic feet	Number of cubic feet per minute passing out at outlet	Number of persons employed inside
Delaware, Laekawanna and Western Railroad Co. Hyde Park Colliery:	Shaft, ----	Gaseous,	Fan, ----	{ 24 14 4	6 4 4	6.9 4 4	60 115 33	1.5 .5 .5	Guibal, -- Guibal, -- Guibal, --	Steam, --- Electricity, --- Steam, ---	6 6 1	80,844 54,342 27,720	60,990 39,510 22,300	111,387 73,210 32,300	177 120 22
	Slope, ----	Non-gas.,	Fan, ----	14	4	4	66	1.4	Guibal, --	Steam, ---	10	148,080	149,670	199,160	312
	Shaft, ----	Gaseous,	Fan, ----	24	6	6.9	70	2	Guibal, --	Steam, ---	8	185,325	134,525	202,000	236
	Shaft, ----	Non-gas.,	Fan, ----	{ 24 24	8 6	6 6	60 60	1.3	Guibal, -- Guibal, --	Steam, --- Steam, ---	2 7	41,000 87,920	25,220 62,460	41,000 88,320	102 256
	Shaft, ----	Gaseous,	Fan, ----	12	4	4	121	.8	Guibal, --	Steam, ---	8	65,700	52,600	72,000	200
Sloan Colliery:	Shaft, ----	Gaseous,	Fan, ----	14	4	4	125	.8	Guibal, --	Steam, ---	10	148,080	149,670	199,160	312
	Shaft, ----	Gaseous,	Fan, ----	24	8	6	66	1.4	Guibal, --	Steam, ---	10	184,170	162,170	219,500	364
	Shaft, ----	Gaseous,	Fan, ----	{ 18 14 4	4.5 4 4	4.5 4 4	125 108 104	.9 1 1	Guibal, -- Guibal, -- Guibal, --	Steam, --- Steam, --- Steam, ---	6 5 5	104,405 79,800 56,020	89,990 68,410 48,690	130,100 87,060 72,910	263 150 90
	Slope, ----	Gaseous,	Fan, ----	12	3.5	3.5	60	.5	Guibal, --	Steam, ---	2	38,000	31,760	49,200	97
	Shaft, ----	Gaseous,	Fan, ----	16	5	4.5	118	1	Guibal, --	Steam, ---	9	131,951	112,169	215,158	329
Bellevue Colliery:	Shaft, ----	Gaseous,	Fan, ----	25	8	6	43	1	Guibal, --	Steam, ---	7	145,269	126,650	179,477	286
	Shaft, ----	Gaseous,	Fan, ----	11	4	4	90	1	Guibal, --	Steam, ---	6	99,200	86,600	108,200	364
	Tunnel, ----	Non-gas.,	Fan, ----	14	4	4	40	.8	Guibal, --	Steam, ---	1	20,600	17,900	22,000	50

Delaware and Hudson Co.

Colliery	Shaft	Gaseous, Non-gas,	Fan, Natural,	17	5	5	75	.4	Guibal,	Steam,	24,500 27,800 18,900 14,300 8,300 15,300 46,490 11,700 12,600	21,700 25,200 17,200 13,600 7,800 14,500 38,260 10,200 10,100	26,600 30,900 19,100 16,300 9,200 16,100 50,240 12,000 13,200	140 106 84 45 70 125 40 38 8 5 9 12	
Greenwood, New No. 1,	Shaft,	Gaseous,	Fan,							Steam,	2				
Greenwood, Old No. 1,	Drift,	Non-gas,	Natural,								2				
Greenwood No. 8,	Drift,	Non-gas,	Natural,								1				
Greenwood No. 12,	Drift,	Non-gas,	Natural,								1				
Greenwood No. 11,	Drift,	Non-gas,	Natural,								1				
Greenwood No. 2,	Slope,	Non-gas,	Fan,	14	4	4	45	.3	Guibal,	Steam,	1				
Greenwood No. 15,	Shaft,	Gaseous,	Fan,	17	5	5	70	.7	Guibal,	Steam,	4				
Greenwood, Oak Hill,	Drift,	Non-gas,	Fan,	10	3	3	70	.3	Guibal,	Steam,	1				
Greenwood No. 6,*	Drift,	Non-gas,	Natural,								1				
Greenwood No. 7,*	Drift,	Non-gas,	Natural,												
Greenwood No. 14,*	Drift,	Non-gas,	Natural,												
Greenwood No. 16,†	Drift,	Non-gas,	Natural,												
Scranton Coal Co.															
Capouse,	Shaft,	Gaseous,	Fans,	[20	5.5	5	75	1	Guibal,	Steam,	3	57,000	48,600	59,300	42
				[18	5	5	80	1	Guibal,	Steam,	6	84,000	76,900	89,200	244
Peoples Coal Co.															
Oxford,	Shaft,	Gaseous,	Fan,	16	4.7	4	90	.7	Guibal,	Steam,	10	137,150	135,750	138,900	213
Minooka Coal Co.															
Minooka,†	Drift,	Non-gas,	Natural,												

*Ventilated by Oak Hill Drift.
†New opening, no measurements taken.

TABLE 1.—Operators, location of collieries, railroads, etc.

Names of Operators and Collieries	County	Name of General Superintendent	Post Office	Name of Super-Intendent	Post Office	Railroad to Mine
Delaware, Lackawanna and Western Railroad Co.	Lackawanna,	R. A. Phillips,	Scranton,	{Thos. J. Williams	Scranton,	D., L. and W.
Hyde Park,				{Thos. J. Williams		
Sloan and Central,				{Thos. J. Williams		
Hampton,				{Thos. J. Williams		
Continental,				{Thos. J. Williams		
Archbald,				{E. J. Evans,		
Bellevue,				{E. J. Evans,		
Dodge,				{E. J. Evans,		
Hoiden,				{E. J. Evans,		
National,				{E. J. Evans,		
Washeries	Lackawanna,	E. A. Phillips,	Scranton,	{Thos. J. Williams	Scranton,	D., L. and W.
Hyde Park,				{Thos. J. Williams		
Archbald,				{George Wechers,		
Hampton,				{George Wechers,		
Bellevue,						
Delaware and Hudson Co.	Lackawanna,	O. O. Rose,	Scranton,	John Lovering,	Moosle,	Delaware and Hudson
Greenwood,	Lackawanna,	W. L. Allen,	Peckville,	John Von Bergen,	Scranton,	Ontario and Western
Greenwood washery,	Lackawanna,	James G. Sheppard,	Scranton,	John G. Hayes,	Scranton,	D., L. and W.
Capouse,	Lackawanna,	W. P. Boland,	Scranton,	M. J. Healey,	Plains,	D., L. and W.
Capouse washery,	Lackawanna,	Thomas F. Quinn,	Scranton,		Scranton,	
Oxford,	Lackawanna,		Scranton,			
Peoples Coal Co.						
Marian Coal Co.						
Marian washery,						
Minooka Coal Co.						
Minooka,						

TABLE 2.—Number of tons of coal mined, number of persons employed, number killed and injured, quantity of powder and dynamite used, etc.

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Number of kegs of powder used	Number of pounds of dynamite used	Number of horses and mules	
Delaware, Lackawanna and Western Railroad Co.		2,663,113	67,808	44,720	2,775,641	6,083	23	31	126,605	113,416	510		
Hyde Park, -----	Lackawanna.	367,318	5,478	18,676	323,257	241	694	2	3	16,244	35,798	61	
Sloan and Central, -----		154,733	-----	367	367,685	210	877	4	3	15,447	3,126	46	
Hampton, -----		236,004	837	1,710	239,151	222	208	3	4	6,361	8,422	40	
Continental, -----		464,158	23,634	618	488,410	240	588	2	3	12,334	3,810	74	
Archbald, -----		379,902	450	15,918	396,270	211	861	3	2	20,941	2,745	92	
Bellevue, -----		219,062	264	855	220,181	192	561	7	5	16,876	14,210	46	
Dodge, -----		284,637	15,014	1,858	301,509	239	459	2	5	11,975	6,000	56	
Holden, -----		257,586	22,131	4,570	284,297	256	682	-----	3	10,423	306	29	
National, -----		-----	-----	-----	-----	-----	-----	-----	3	16,004	38,999	66	
-----			2,663,113	67,808	44,720	2,775,641	6,083	23	31	126,605	113,416	510	
Hyde Park, -----	Lackawanna.	67,173	-----	-----	67,173	275	95	-----	-----	-----	-----	-----	
Archbald, -----		76,329	-----	-----	76,329	233	23	-----	-----	-----	-----	-----	
Hampton, -----		297,451	-----	-----	297,451	290	59	1	-----	-----	-----	-----	
Bellevue, -----		394,088	-----	-----	394,088	287	55	-----	-----	5	-----	6	
-----		735,841	-----	-----	735,841	6	162	1	-----	5	6		

TABLE 2.—Continued

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employees	Total production of coal in tons	Number of days worked	Number of employees	Number of fatal accidents	Number of non-fatal accidents	Number of kegs of powder used	Number of pounds of dynamite used	Number of horses and mules
Central boiler plant, Central water shaft, Central power station, Continental lumber yard,	Lackawanna,						67 6 11 29	1				2
Totals,		3,398,954	67,808	44,720	3,511,482		6,353	25	31	126,610	113,416	518
Delaware and Hudson Co. Greenwood, Greenwood washery,	Lackawanna,	222,311 830	28,776 9,330	2,615	253,702 10,100	180	922 25	3	5	20,892	44,544	111
Totals,		223,141	38,106	2,615	263,862		947	3	5	20,892	44,544	111
Scranton Coal Co. Oapouse,	Lackawanna,	220,796	16,500	3,297	240,593	174	667		5	13,450	29,800	71
Oxford, Peoples Coal Co. Marian Coal Co.	Lackawanna,	93,165	11,142	92,530	196,837	218	416	5	2	11,475	13,700	120
Marian washery, Minooka Coal Co.	Lackawanna,	53,554	2,406	2,784	58,744		27					2
Minooka, Grand totals,	Lackawanna,	2,678	100	3,079	5,857	154	16			320		3
		3,592,288	136,062	149,025	4,277,375		8,431	33	43	172,747	201,400	825

TABLE 2.—Part 2

Names of Operators	County	Number of Boilers				Locomotives			Number of steam engines of all classes	Total horse power	Number of pumps delivering water to surface	Capacity in gallons per minute	Quantity delivered to surface per minute—gallons	Number of electric dynamos	Number of air compressors	
		Cylindrical	Horse power	Tubular	Horse power	Total horse power	Steam	Alr								Electric
Delaware, Lackawanna and Western Railroad Co.,	Lackawanna,	20	1,370	43	13,857	15,227	6	59	151	12,528	27	25,411	15,682	11	2	
Delaware and Hudson Co.,		27	768	5	875	1,643	4	---	55	1,805	4	2,500	1,600	1	1	
Scranton Coal Co.,		5	1,500	7	1,190	1,190	---	---	7	970	5	5,031	2,550	1	1	
Peoples Coal Co.,		5	1,500	---	---	1,500	---	---	14	857	8	1,575	750	2	1	
Mariou Coal Co.,		1	150	2	100	310	---	---	3	95	---	---	---	---	---	---
Minooka Coal Co.,		1	50	1	50	50	---	---	---	---	---	---	---	---	---	---
Totals,		---	53	3,788	58	16,132	19,020	10	59	230	16,255	39	34,517	20,582	14	4

Table 3.—Number of each class of employees inside and outside of mines

Names of Operators and Collieries	County	Inside										Outside						Grand total inside and outside					
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Doorboys and helpers	Pumpmen	Company men	All other employees	Total inside	Superintendents	Foremen	Blacksmiths and carpenters	Engineers and firemen	State pickers (boys)		State pickers (men)	Bookkeepers and clerks	All other employes	Total outside	
Delaware, Lackawanna and Western Railroad Co. Hyde Park, Sloan and Central, Hampton, Continental, Archbald, Bellevue, Dodge, Holden National,	Lackawanna,	2	1	4	183	44	20	6	60	73	576	---	1	7	10	28	10	2	60	118	694		
		3	---	7	243	36	20	8	69	100	729	---	2	8	9	38	5	3	83	148	877		
		1	1	2	96	19	7	---	---	55	14	291	---	1	4	2	21	3	2	44	77	368	
		1	1	4	154	57	12	2	2	35	44	463	---	1	7	6	58	5	2	46	125	588	
		3	2	5	252	77	14	---	---	31	81	716	---	2	7	11	32	10	4	78	145	841	
		1	1	3	285	48	10	10	25	128	809	---	1	7	12	60	5	5	5	93	184	993	
		1	1	2	142	49	4	3	21	96	462	---	1	7	6	29	6	---	3	53	99	561	
		1	2	2	132	131	25	7	2	7	57	367	---	1	5	7	35	---	3	41	92	459	
		1	2	4	188	50	17	4	22	66	564	---	1	4	13	83	---	1	3	63	118	682	
		14	9	38	1,675	401	117	37	325	659	4,977	---	12	57	76	384	39	27	561	1,106	6,083		
		Washeries Hyde Park, Archbald, Hampton, Bellevue,	Lackawanna,	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
				---	1	---	---	---	---	---	5	---	6	---	---	---	2	1	---	1	15	79	25
				1	---	---	---	---	---	---	9	---	10	---	2	4	3	---	---	---	20	23	23
				---	---	---	---	---	---	---	---	7	8	---	1	1	4	1	---	---	1	38	49	59
2	---			1	---	---	---	---	14	7	24	---	3	5	9	6	---	---	1	39	37	55	
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	112	138	162		

TABLE 4.—Fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Mine	County	Nature and Cause of Accident in Brief
Jan. 14	Bolac Jasuta.	Polish, ----	Miner, -----	22	M. 1	----	----	Greenwood, -----		Instantly killed by flying coal from blast. He had prepared a hole for a blast and was ramming a cartridge into the hole with a miner's needle when the charge exploded.
15	Anthony Phillipcoski, ..	Polish, ----	Laborer, -----	21	S. ----	----	----	Hampton, -----		Killed by sliding piece of roof rock while moving another piece of roof rock to the gob at the face of the chamber, Diamond vein.
Feb. 5	Martin Resiski,	Russian, ---	Laborer, -----	28	M. 1	2	----	Sloan shaft, -----		Instantly killed by fall of roof while loading a car of coal at face of chamber on No. 2 gangway, Clark vein.
8	Patrick Hartnett,	Irish, -----	Laborer, -----	34	M. 1	3	----	Greenwood, -----	Lackawanna,	Instantly killed by fall of roof while working in a chamber timbering and cleaning some gob preparatory to re-moving pillars. He heard the roof above him working and tried to reach a place of safety, but was caught by the fall.
25	Thomas Sanders,	American, ---	Runner, -----	28	S. ----	----	----	Archbald, -----		Fatally injured. Squeezed between loaded cars on gangway in Big vein while helping to place derailed cars on track. He was reaching in to uncouple the cars when the brakeman signalled the motorman to push back, and as he did so Sanders was caught between the cars. Died March 8.
Mar. 11	Paul Seek,	Italian, ----	Slate boy, ----	17	S. ----	----	----	Hampton washery, -----		Killed by falling from one floor to another while running around the washery, away from his duty. Outside.
23	Michael Minnitch,	Polish, ----	Laborer, -----	24	S. ----	----	----	Oxford, -----		Killed by a rock saddle that fell from the roof at face of gangway, No. 2 Dunmore vein, while loading a car

TABLE 4.—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Mine	County	Nature and Cause of Accident in Brief
April 6	Felix Golecki, -----	Polish, ----	Laborer, -----	27	M. 1	2	2	Central, -----		Instantly killed by fall of roof while loading a car of coal at face of chamber on No. 8 gangway, New County vein.
23	John Syron, -----	Irish, -----	Miner, -----	37	M. 1	3	3	Hampton, -----		Instantly killed by fall of top coal. He had fired three blasts in the bottom coal, but the third did not cut out and he was drilling a hole in the partly discharged coal when the over-hanging top coal fell on him.
23	Alex Roscoe, -----	Polish, ----	Miner, -----	35	M. 1	4	4	Hampton, -----		Instantly killed by blast while making a roadway in the Diamond vein. He had drilled a hole in the rock and charged it with dynamite. Just as he was about to ignite the fuse the charge exploded. Electrocutted. Came in contact with an electric wire near roof of power house. Outside.
27	John Mayer, -----	German, ----	Carpenter, ----	48	M. 1	3	3	Central boiler station, -----	Lackawanna,	Killed. Struck on head by piece of rock that fell down shaft that was being sunk from surface to Duamore vein.
May 2	Alfred McCormack, ----	Irish, -----	Sinker, -----	39	S. -----	-----	-----	Hyde Park air shaft, -----		Killed. Run over by trip of three empty cars that were going down a slope. Fatally injured by blast. He, with his miner, was taking up some bottom coal at the face of the gangway and was ready to fire a blast. The miner told him to go down the gangway to keep any one from coming up. When the charge exploded some coal flew over the gob and struck Duliski on the head.
6	Thomas Burke, -----	Irish, -----	Com p a n y man, -----	39	S. -----	-----	-----	Bellevue shaft, ----		
12	Nikifort Dulski, -----	Polish, ----	Laborer, -----	27	S. -----	-----	-----	Bellevue slope, ----		

May 28	Tony Oscors,	Polish,	Laborer,	26	M.	1	ural,	Fatally injured by fall of roof while loading a car of coal at face of chamber on No. 8 gangway, New County vein.
June 15	Thomas Goodwin,	English,	Miner,	43	M.	1	Dodge,	Instantly killed by fall of roof while sitting down near the face of the chamber on V. counter, New County vein, filling some bits. If he had examined the roof he could have seen that it was loose.
25	William Stile,	German,	Laborer,	50	M.	1	Oxford,	Instantly killed by fall of roof while loading a car of coal at face of chamber in Diamond vein.
July 9	Louis Cabutche,	Italian,	Miner,	50	M.	1	Oxford,	Killed by blast. He charged a rock hole at face of chamber and after lighting the fuse went to a place of safety. Thinking that the shot had missed fire he went back to the chamber and when he was within three or four feet of the hole the shot exploded.
21	Peter Leboski,	Polish,	Laborer,	19	S.		Continental,	Killed by fall of roof while loading a car of coal at face of chamber on Parry's gangway, New County vein.
Aug. 1	Godfrey Ross,	German,	Miner,	58	M.	1	} Bellevue shaft,	Ross instantly killed and Hughes fatally injured by an explosion of powder.
1	Benjamin Hughes,	Welsh,	Laborer,	40	S.	6		
4	Mike Croskie,	Polish,	Miner,	40	M.	1	Oxford,	Instantly killed by fall of roof at face of chamber in No. 3 Dunmore vein. He was barring out coal and had worked in under the falling roof about eight feet. He did not notice a slip that ran through the roof and when he had worked as far as the slip the roof fell on him.

Lackawanna,

TABLE 4.—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Mine	County	Nature and Cause of Accident in Brief
Aug. 11	Adam Walovitch, ----	Lithuanian,	Laborer, ----	35	M.	1	2	Hyde Park shaft, ----		Fatally injured by fall of roof in cross-cut at face of chamber on H gangway, Dunmore vein. Died September 2.
20	Louis Borscheck, ----	German, ----	Miner, ----	45	M.	1	6	Bellevue slope, ----		Instantly killed by fall of roof. He and his laborer were loading old lumber in an old chamber getting ready to take up bottom coal. When the laborer heard the roof crack he called to the miner to run, but before he could reach a place of safety the roof fell on him. Instantly killed by fall of roof at face of chamber on No. 5 gangway, Rock vein.
Sept. 5	Martin Segment, ----	Polsb, ----	Laborer, ----	29	S.			Archbald, ----	Lackawanna,	He, with another laborer, was working with two miners. They had fired a blast and after examining the roof decided that it was safe. They then told the laborers to load the cars and while they were loading them the roof fell on Segment.
29	Bernard Gerrity, ----	American, ----	Motor brake-man,	21	S.			Dodge, ----		Fatally injured. Squeezed between loaded mine cars while working with a motor man on the night shift. The motor was going down a heavy grade with a trip of six loaded cars when an axle of one of them broke. Gerrity went back to uncouple the cars and when the motor pushed back he reached in between the cars while they were in motion and was squeezed. Died next day.

Oct. 1	Edward Haggerty, ---	American,---	Motorman, ---	22	M.	1	Bellevue shaft, ----	Fatally injured. Crushed between rock truck and mine motor. He and two other men had partly unloaded the truck and pushed it out on the airway road so that they could bump it and it would then unload itself. While they were moving the truck it jumped the track and Haggerty was caught between the truck and motor.
20	John Sinkawicz, ----	Lithuanian,	Miner, ----	31	M.	1	4 Sloan surface vein.	Fatally injured by fall of roof at face of chamber. He and his laborer were drilling a hole at the face when a portion of the roof fell on him.
22	William J. Morgan, --	American,--	Fire-boss, ----	45	M.	1	Continental, ----	Fatally injured by blast. He was making his second inspection tour, and in going from one chamber to another through a cross-cut he was struck by flying coal from a blast that had been fired in a cross-cut in the opposite pillar. Died January 9, 1909.
Nov. 6	John Claynosky, ----	Polish, ---	Miner, ----	37	M.	1	Bellevue slope, --	Fatally injured at face of chamber. He was cleaning rock from the bottom coal and had propped the roof with a piece of mine rail. Instead of blasting the prop out he was trying to knock it out with a drill when the roof fell on the drill, which caught him in the stomach. Died, next day.
9	Dominick Walsh, ----	Irish, ----	Miner, ----	45	M.	1	5 Oxford, ----	Fatally injured by an explosion of gas. He went to his gangway on the night shift without first seeing the fire boss, and when he was about eighty feet from the face of the gangway he ignited a body of gas. Died November 11.
Dec. 5	John Osewski, ----	Polish, ---	Laborer, ----	20	S.	---	Greenwood, ----	Fatally injured. He was struck by flying rock from a blast at face of chamber. Died January 2, 1909.
30	Nickoli Koval, ----	Russian, ---	Laborer, ----	19	S.	---	Archbald, ----	Instantly killed by fall of roof at face of chamber in Rock vein. While helping another laborer to throw back coal from the face, a rock saddle fell from between two vertical water seams and caught him.

Lackawanna,

TABLE 5.—Non-fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Mine	County	Nature and Cause of Accident in Brief
Jan. 23	Frank Slavinski, -----	Polish, -----	Miner, -----	24	S.	Hyde Park shaft, -----		Leg fractured. Struck by mine car on main gangway road, Dunmore vein.
Feb. 11	Ralph Knott, -----	American, -----	Motor brakeman, -----	19	S.	Hampton, -----		Leg fractured. Caught between mine car and motor while pushing car into chamber in Diamond vein.
Mar. 11	Jessie Boyer, -----	American, -----	Driver, -----	19	S.	Archbald, -----		Leg fractured. Caught between mine car and rib on O gangway, Big vein.
Mar. 6	John Paris, -----	Polish, -----	Laboret, -----	25	S.	Capouse, -----		Leg fractured by fall of bony at face of chamber in Clark vein.
12	Stanley Bozarski, -----	Polish, -----	Miner, -----	20	S.	Greenwood, -----		Collar bone fractured and face bruised by flying rock from blast at face of chamber, No. 3 Dunmore vein.
16	Joseph Usk, -----	Polish, -----	Miner, -----	32	M.	Sloan surface vein, -----		Received a compound fracture of leg by fall of roof in cross-cut at face of chamber while tamping a hole.
16	John Shrives, -----	American, -----	Motor brakeman, -----	21	S.	Holden, -----		Hand crushed. Run over by mine car.
21	William Malia, -----	American, -----	Driver, -----	19	S.	National, -----	Lackawanna,	Foot crushed and toes amputated. Run over by mine car on main gangway road, Clark vein.
28	Thomas Thomas, -----	Welsh, -----	Laborer, -----	40	M.	Dodge, -----		Hip dislocated and shoulder bruised by fall of roof at face of chamber in New County vein.
31	Reese Morgan, -----	Welsh, -----	Company man, -----	60	M.	Capouse, -----		Leg fractured and shoulder dislocated. Run over by mine car while standing at mouth of chamber in Dunmore vein.
May 13	Wolenty Golescheski, -----	Polish, -----	Laborer, -----	33	M.	Greenwood, -----		Leg fractured. Run over by mine car near face of chamber in Checker vein.
June 1	David Davis, -----	Welsh, -----	Plane runner, -----	22	S.	Continental, -----		Leg fractured. Struck by rope on plane.
4	Joseph Codic, -----	Polish, -----	Laborer, -----	32	M.	Continental, -----		Ankle broken and nose fractured by jumping into mine car from platform on pitch.

June 6	Thomas Bengé,	American,	Miner,	42	M. Holden,	Ribs fractured and lung punctured by flying coal from blast at face of chamber, Clark vein.
13	John Sitco,	Polish,	Laborer,	21	S. Arehbalá,	Leg fractured. Struck by tail rope on main banlage road.
17	Peter Coyne,	Irish,	Miner,	48	M. Greenwood,	Leg fractured by fall of top coal at face of chamber, New County vein.
18	Paul Gayaski,	Polish,	Miner,	44	M. Dodge,	Two ribs broken and cut about body and legs by flying coal from blast at face of chamber, New County vein.
24	John Oletski,	Polish,	Laborer,	40	M. Bellevue shaft,	Leg fractured by fall of top coal at face of chamber, Clark vein.
July 7	William Cassidy,	Irish,	Driver,	19	S. Hampton,	Collar bone fractured by falling prop on main road.
8	George Sejwa,	Polish,	Miner,	40	M. Capouse,	Leg fractured by fall of roof at face of chamber in No. 3 Dunmore vein.
9	Anthony Mahon,	Irish,	Driver,	28	M. Oxford,	Arm amputated. Caught between mine cars at foot of slope, No. 3 Dunmore vein.
13	William Viscoski,	Polish,	Miner,	30	M. Hyde Park shaft,	Leg fractured by fall of top coal at face of chamber in Dunmore vein.
18	George Doran,	Slavonian,	Laborer,	45	M. Holden,	Leg amputated. Caught between mine cars near face of chamber, Clark vein.
Aug. 4	Thomas F. Coyne,	American,	Runner,	37	M. Greenwood,	Hips and body bruised. Squeezed between cars. Outside.
22	John Matuch,	Italian,	Miner,	37	M. National,	Arm fractured by flying coal from blast near face of chamber.
Sept. 8	John McBernmott,	Irish,	Fire-boss,	48	M. Capouse,	Skull fractured by flying coal from blast while going through cross-cut.
16	James Carey,	Irish,	Miner,	35	M. Hampton,	Back and legs injured by fall of roof at face of chamber.
Oct. 6	John Golden,	American,	Motor brakeman,	22	S. Dodge,	Leg amputated. Caught between mine motor and narrow side of gangway road in New County vein.
10	Joseph Doberaski,	Polish,	Laborer,	45	M. Continental,	Foot crushed and scalp lacerated by fall of roof at face of chamber.
19	John Ferrick,	Irish,	Miner,	40	M. Capouse,	Knee fractured by fall of roof at face of gangway.
20	Domoniek Taper,	Lithuanian,	Laborer,	33	S. Sloan surface vein,	Leg fractured by fall of roof at face of chamber.
23	Andrew Guitus,	Austrian,	Miner,	34	M. Hyde Park shaft,	Leg fractured by fall of roof at face of chamber.
28	John Shinniski,	Polish,	Miner,	34	M. Dodge,	Leg fractured and three ribs broken by fall of roof at face of gangway.
Nov. 11	Anthony Penkoski,	Polish,	Miner,	35	M. Sloan surface vein,	Hip fractured by fall of roof at face of gangway.
21	George Gondack,	Polish,	Laborer,	32	M. Oxford,	Arm fractured by fall of roof at face of chamber.
Dec. 3	Adam Jukofski,	Polish,	Laborer,	31	S. Dodge,	Received a compound fracture of both legs by fall of roof at face of chamber.

Lackawanna,

TABLE 5.—Continued

Date of accident	Name of Person	Occupation	Nationality	Age	Married or single	Name of Mine	County	Nature and Cause of Accident in Brief
Dec. 5	Valenty Sireboda, ---	Polish, ---	Miner, ---	34	M.	Greenwood, ---		Seriously injured by flying rock from blast at face of chamber.
8	Edward Dunn, ---	American, ---	Footman, ---	31	M.	Belleuve shaft, ---		These men were going down the shaft from the Clark vein to the Dunmore vein to make a hoist. When within thirty feet of the bottom the engineer lost control of the engine and before he could regain control of it the cage struck the bottom with such force that the men were badly injured about the legs and back.
8	Walter Cooper, ---	American, ---	Footman, ---	32	M.	Belleuve shaft, ---		Nose fractured and face bruised by kick from mule.
8	Frank Harner, ---	American, ---	Footman, ---	22	M.	Belleuve shaft, ---	Lackawanna,	Leg badly crushed. Caught between motor and mine car.
8	Thomas Ford, ---	American, ---	Footman, ---	32	M.	Belleuve shaft, ---		
10	Leo Novroet, ---	Polish, ---	Driver, ---	17	S.	National, ---		
15	Lewis Jenkins, ---	American, ---	Motorman, ---	28	M.	Hampton, ---		

CONDITION OF COLLIERIES

DELAWARE, LACKAWANNA AND WESTERN RAILROAD COMPANY

Hyde Park Colliery.—Ventilation, drainage, roads and general condition as to safety good.

Sloan Colliery.—Ventilation, roads, drainage and general condition as to safety good.

Hampton Colliery.—Ventilation fair; roads, drainage and general condition as to safety good.

Continental Colliery.—Ventilation, roads, drainage and general condition as to safety good.

Archbald Colliery.—Ventilation fair; roads, drainage and general condition as to safety good.

Bellevue Colliery.—Ventilation good; roads and drainage fair; general condition as to safety good.

Dodge Colliery.—Ventilation, roads and drainage fair; general condition as to safety good.

Holden Colliery.—Ventilation, roads, drainage and general condition as to safety good.

National Colliery.—Ventilation, roads, drainage and general condition as to safety good.

DELAWARE AND HUDSON COMPANY

Greenwood Colliery.—Ventilation good; roads and drainage fair; general condition as to safety good.

SCRANTON COAL COMPANY

Capouse Colliery.—Ventilation, roads, drainage and general conditions as to safety good.

PEOPLES COAL COMPANY

Oxford Colliery.—Ventilation good; roads and drainage fair; general condition as to safety good.

IMPROVEMENTS

DELAWARE, LACKAWANNA AND WESTERN RAILROAD COMPANY

Hyde Park Colliery.—The new air shaft 12 x 12 in progress of sinking in 1907 from the surface to the lower Dunmore vein, depth 583 feet, was completed, and a new 8 x 8 x 24 steel casing ventilating fan driven by an 18 x 36 single Corliss engine was put in operation November 1, resulting in an increase in the ventilation of about 103,000 cubic feet.

One rock slope from the No. 2 to the No. 3 Dunmore vein, 7 x 12, to a depth of 193 feet.

One 4 x 4 x 14 ventilating fan on the surface vein, driven by a 10 H. P. electric motor, was installed; one 50 H. P. electric motor to drive the ventilating fan at the Central Air Shaft to replace the steam engine, and one 35 H. P. electric hoist to replace the steam hoist to operate the Central Air Shaft.

Hampton Colliery, Outside.—Installed one 750 gallon steam pump for fire protection.

Sloan Colliery.—Installed one 150 H. P. electric hoist on the rock slope sunk from the Clark vein to No. 2 Dunmore vein.

Continental Colliery.—One rock tunnel, 7 x 12, in length 218 feet, from the Clark to the New County vein on the pitch, for the purpose of shortening the haulage.

The main shaft and the air shaft were concreted, replacing the old wood cribbing.

Bellevue Colliery.—New concrete barn in slope. Rock tunnel from New County to Big vein, and a second opening to the same tunnel. Rock tunnel from No. 2 to No. 1 Dunmore vein, and a second opening to the same tunnel.

Built new concrete blacksmith and carpenter shop, outside.

Dodge Colliery.—Concrete partition in main shaft.

Holden Colliery.—Installed electric hoist on plane to Surface vein.

National Colliery.—Installed dust fan in breaker. New brick blacksmith and carpenter shop, concrete barn built, inside. New fire pump and fire line installed. Outside.

DELAWARE AND HUDSON COMPANY

Greenwood Colliery.—Drift opened from outside to Checker vein. Haulage road built from breaker to head of plane, outside, distance 1,000 feet. A plane 400 feet in length, equipped with 10 x 12 engines, was built to hoist coal from mouth of drift to the Surface railroad.

Fifth District

LACKAWANNA, LUZERNE AND SULLIVAN COUNTIES

Scranton, Pa., March 6, 1909.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor to transmit herewith my report as Inspector of Mines of the Fifth Anthracite District for the year ending December 31, 1908.

The statistics relating to accidents in the district show that of the accidents that occurred in the mines during the year more than fifty-eight per cent. were caused by falls and nearly all of them occurred at the working faces. It is generally the case that the number of accidents by falls exceeds the number from all other causes.

Respectfully submitted,

H. D. JOHNSON,
Inspector.

SUMMARY OF STATISTICS

Number of collieries,	16
Number of mines,	32
Number of mines in operation,	30
Number of tons of coal shipped to market,	3,698,140
Number of tons used at mines for steam and heat,	260,066
Number of tons sold to local trade and used by employes, ..	50,957
Number of tons produced,	4,009,163
Number of tons produced by compressed air machines, ..	—
Number of tons produced by electrical machines,	254,113
Number of persons employed inside of mines,	6,053
Number of persons employed outside,	2,281
Number of fatal accidents inside of mines,	24
Number of fatal accidents outside,	4
Number of non-fatal accidents inside of mines,	45
Number of non-fatal accidents outside,	8
Number of tons of coal produced per fatal accident inside, ..	167,048
Number of persons employed per fatal accident inside, ...	252
Number of persons employed per fatal accident outside, ..	570
Number of persons employed per non-fatal accident inside, ..	134
Number of persons employed per non-fatal accident out- side,	285
Number of wives made widows,	14
Number of children orphaned,	20
Number of steam locomotives used inside of mines,	1
Number of steam locomotives used outside,	13
Number of electric motors used inside,	60
Number of fans in use,	22
Number of furnaces in use,	1
Number of gaseous mines in operation,	12
Number of non-gaseous mines in operation,	18
Number of old mines abandoned,	1

TABLE A

PRODUCTION OF COAL

Names of Operators	Tons
Pennsylvania Coal Company,	1,166,801
Delaware, Lackawanna and Western Railroad Company,	1,008,436
Jermyn and Company,	578,789
Elliott McClure and Company,	270,444
Connell Anthracite Mining Company,	254,113
Hillside Coal and Iron Company,	239,343
Hudson Coal Company,	173,590
Northern Anthracite Coal Company,	137,670
O'Boyle-Foy Anthracite Coal Company,	95,387
Austin Coal Company,	38,673
Robertson and Law,	24,959
Brookside Coal Company,	16,420
Randall and Schaad Brothers,	4,538
Total,	<u>4,009,163</u>

Production by Counties

Lackawanna,	2,560,117
Luzerne,	957,338
Sullivan,	491,708
Total,	<u>4,009,163</u>

TABLE C.—Classification of Fatal Accidents Inside and Outside of Mines

	Months												Totals	Percentages	
	January	February	March	April	May	June	July	August	September	October	November	December			
Causes of Accidents Inside															
Falls of coal, -----					1					2		1	4	16.67	
Falls of roof, -----	1	2	1	1	1	1					1	1	10	41.67	
Mine cars, -----	1	1				2	1				1		6	25.00	
Premature blasts, -----	1	1					1						2	8.33	
Mules, -----													1	4.17	
Machinery, -----		1											1	4.16	
Totals, -----	2	6	1	1	2	3	2	1	2	2	2	2	24	100.00	
Causes of Accidents Outside															
Cars, -----				1									1	25.00	
Machinery, -----			1	1								1	3	75.00	
Totals, -----			1	2							1		4	100.00	
Grand totals inside and outside, -----	2	6	2	3	2	3	2	1	2	3	2	2	28		

TABLE D.—Classification of Non-fatal Accidents Inside and Outside of Mines

	Months												Totals	Percentages	
	January	February	March	April	May	June	July	August	September	October	November	December			
Causes of Accidents Inside															
Falls of coal, -----	1	1								1			1	4	8.89
Falls of roof, -----	1	2	2	3	1			1	2			2	2	16	35.56
Mine cars, -----		1	2	1	2		2		1	1		2	3	15	33.34
Explosions of gas and dust, -----			1											1	2.22
Explosions of powder and dynamite, -----	2													2	4.44
Premature blasts, -----		1	1						1					3	6.67
Mules, -----						1								1	2.22
Machinery, -----	1													1	2.22
Miscellaneous, -----					1			1						2	4.44
Totals, -----	5	5	6	4	4	1	2	2	4	2	4	6	45	100.00	
Causes of Accidents Outside															
Cars, -----						1	1	1						3	37.50
Machinery, -----													1	1	12.50
Miscellaneous, -----						1				1	1	1	4	5.00	
Totals, -----						2	1	1		1	1	2	8	100.00	
Grand totals inside and outside, -----	5	5	6	4	4	3	3	3	4	3	5	8	53		

TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Miners,	1	2	1		1	1	1			1	1	1	10
Miners' laborers,		2			1	1		1		1			7
Drivers and runners,	1	2		1		1					1		6
Doorboys and helpers,							1						1
Totals,	2	6	1	1	2	3	2	1		2	2	2	24
Outside													
Slatepickers (boys),			1	1									2
All other employes,				1							1		2
Totals,			1	2							1		4
Grand totals inside and outside, ..	2	6	2	3	2	3	2	1		2	3	2	28

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Miners,	4	2	1	1				2	2		2	2	16
Miners' laborers,		3	2	1					1	1	1	1	12
Drivers and runners,			2	2	2	1			1		1		7
Pumpmen,	1												1
All other employes,			3				2			1		3	9
Totals,	5	5	6	4	4	1	2	2	4	2	4	6	45
Outside													
Blacksmiths and carpenters,										1			1
Slatepickers (boys),						1							2
All other employes,						1	1	1			1	1	5
Totals,						2	1	1		1	1	2	8
Grand totals inside and outside, ..	5	5	6	4	4	3	3	3	4	3	5	8	53

TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												Totals	
	January	February	March	April	May	June	July	August	September	October	November	December		
American, -----			1		1									2
English, -----	1													1
Welsh, -----													1	1
Irish, -----		1				1	1							3
Polish, -----	1	2	1	2	1	2		1				2	2	14
Italian, -----		1		1						1				3
Slavonian, -----		1							1					2
Austrian, -----							1							1
Russian, -----		1												1
Totals, -----	2	6	2	3	2	3	2	1		2	3	2		23

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

	Months												Totals	
	January	February	March	April	May	June	July	August	September	October	November	December		
American, -----	3		3	1				1	2				4	14
English, -----		1				1			1					3
Welsh, -----		1									1			2
Scotch, -----	1			1										2
Irish, -----				1		1								2
German, -----									2					2
Polish, -----		1	2		2		3	2	1	1	1	1	1	14
Italian, -----	1	1	1	1	1						2	1	1	8
Slavonian, -----					1								1	2
Austrian, -----											1	1		2
Russian, -----		1				1								2
Totals, -----	5	5	6	4	4	3	3	3	4	3	5	8		53

TABLE 1.—Operators and mines, kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents, and number of persons employed inside

Names of Operators and Mines	Kind of opening	Gasous or non-gasous	Method of ventilation	Diameter of fan in feet	Width of blades in feet	Depth of blades in feet	Number of revolutions per minute	Water gauge developed—in inches	Name of fan	Power used	Area of furnace bars in square feet	Number of splits of air currents	Number of cubic feet of air per minute entering the mine at inlet	Total quantity of air per minute circulating in all the splits in cubic feet	Number of cubic feet per minute passing out at outlet	Number of persons employed inside
Pennsylvania Coal Co.	Old Forge No. 1, Shaft, 2 tunnels,	Gasous,	Fan, -----	20	6.5	6.5	52	.9		Steam, -----		5	67,200	59,760	86,375	1,018
	Old Forge No. 2, Shaft, 2 tunnels,	Gasous,	Fan, -----	20	6.5	6.5	75	.9		Steam, -----		6	109,000	93,000	115,000	
	Old Forge Tunnels,	Non-gas.,	Fan, -----	20	6.5	6.4	50	.5		Electricity, -----		5	126,750	116,100	138,825	
	Clarke Slope,	Gasous,	Fan, -----	17	5.0	4.11	60	.6	Guibal,	Steam, -----		2	37,900	51,800	59,700	
	Central Laws,	Gasous,	Fan, -----	20	6.5	5.5	60	.6		Steam, -----		4	97,600	81,968	138,000	
	Central No. 13, Shaft, -----	Gasous,	Fan, -----	20	6.5	5.5	60	.6		Steam, -----		3	76,900	69,200	90,000	
Delaware, Lackawanna and Western Railroad Co.	Pyne, 2 shafts, -----	Gasous,	Fan, -----	16	4.9	4.0	120	1.3	Guibal, --	Steam, -----		12	155,900	138,970	182,240	608
	Hallstead,* -----	Gasous,	Fan, -----	18	4.0	6.4	108	2.5	Open, ----	Steam, -----		7	73,620	75,290	105,100	
	Taylor, -----	Gasous,	Fan, -----	25	8.0	7.0	66	1.8	Guibal, --	Steam, -----		10	269,776	150,005	293,815	
Jermyu and Co.	Jermyu No. 1 (slope and shaft), -----	Gasous,	Fan, -----	14	4.5	4	90	1.1		Steam, -----		7	126,150	93,750	141,931	858
	Jermyu No. 2, -----	Gasous,	Fan, -----	18	4.25	4	90	1.0	Guibal, --	Steam, -----		4	57,950	54,250	61,031	
	Jermyu No. 3, -----	Gasous,	Fan, -----	18	4.5	4.0	90	1.0		Steam, -----		3	37,250	24,400	41,906	
	Jermyu No. 2, -----	Non-gas.,	Furnace,									1	6,600	5,500	7,425	

*Idle.

TABLE 1.—Operators, location of collieries, railroads, etc.

Names of Operators and Collieries	County	Name of General Superintendent	Post Office	Name of Superintendent	Post Office	Railroad to Mine
Pennsylvania Coal Co. Old Forge, ----- Central, ----- Old Forge Washery, ----- Central Washery, -----	Lackawanna, ----- Luzerne, ----- Lackawanna, ----- Luzerne, -----	W. W. Ingalls, -----	Dunmore, -----	Joseph P. Jennings	Old Forge, -----	Erie
Delaware, Lackawanna and Western Railroad Co. Fyne, ----- Taylor,* ----- Hallstead,* ----- Fyne Washery, -----	Lackawanna, ----- Lackawanna, ----- Luzerne, ----- Lackawanna, -----	R. A. Phillips, -----	Scranton, -----	{ Thomas J. Williams. E. J. Evans, ----- E. J. Evans, ----- Thomas J. Williams. }	Scranton, -----	D., L. and W.
Jermyn and Co. Jermyn Nos. 1, 2 and 3, Jermyn No. 1 Washery, ----- Jermyn No. 2 Washery, -----	Lackawanna, -----	J. J. Jermyn, -----	Scranton, -----	John P. Concoran,	Rendham, -----	Erie
Elliott McClure and Co. Sibley, -----	Lackawanna, -----	R. W. Reese, -----	Rendham, -----	-----	-----	D., L. and W. and L. V.
Connell Anthracite Mining Co. Connells, -----	Sullivan, -----	W. L. Connell, -----	Scranton, -----	W. L. Connell, --	Scranton, -----	Lehigh Valley
Hillside Coal and Iron Co. Consolidated, -----	Luzerne, -----	V. L. Peterson, -----	Scranton, -----	E. D. Caryl, -----	Pittston, -----	Lehigh Valley
Hudson Coal Co. Spring-Brook, ----- Langcliff, -----	Lackawanna, ----- Luzerne, -----	C. C. Rose, -----	Scranton, -----	E. R. Pettebone, --	Dorrancton, -----	Delaware and Hudson
Northern Anthracite Coal Co. Murrays, -----	Sullivan, -----	M. J. Murray, Sr., -----	Dunmore, -----	P. J. Murray, -----	Lopez, -----	Lehigh Valley
O'Boyle-Foy Anthracite Coal Co. O'Boyle-Foys, -----	Sullivan, -----	M. W. O'Boyle, --	Pittston, -----	M. J. Clemmons, --	Murray, -----	Lehigh Valley

*Idle.

Austin Coal Co. Austin Tunnel, -----	Lackawanna, ---	W. G. Robertson,	Scranton, -----	John J. Cosgrove,	Old Forge, -----	Lehigh Valley
Robertson and Law Katy-Did, † -----	Lackawanna, ---	John M. Robertson,	Moosic, -----	-----	-----	Erie
Brookside Coal Co. Brookside Washery, -----	Lackawanna, ---	M. F. Dolphin, --	Scranton, -----	William Dougherty,	Moosic, -----	N. Y. S. and W.
Randall and Schaad Brothers Randall and Schaads, -----	Sullivan, -----	W. J. Schaad, ---	Mildred, -----	W. J. Schaad, ---	Mildred, -----	Lehigh Valley

†Abandoned.

Jermyn Nos. 1, 2 and 3,	Jermyn and Co.	392,295	29,403	3,945	425,643	237	1,067	8	4	22,745	7,850	79
Washeries	Lackawanna,	51,189			51,189	75	32					
Jermyn No. 1,		85,103	14,700	2,154	101,957	143	34					
Jermyn No. 2,		136,292	14,700	2,154	153,146		66					
Totals,		528,587	44,103	6,099	578,789		1,133	8	4	22,745	7,850	79
Sibley,	Elliott McClure and Co.	249,382	14,000	6,462	270,444	254	751	2	3	15,448	15,200	49
Connells,	Connell Anthracite Mining Co.	230,281	21,900	1,872	254,113	252	414	2	7	2,413	15,979	9
Consolidated,	Hillside Coal and Iron Co.	218,039	17,526	3,778	239,343	223	547	2	3	10,049	5,675	63
Spring-Brook,	Hudson Coal Co.	43,919	6,686	867	51,472	107	186	1	2	2,678	899	29
Langeliff,	Lackawanna,	102,817	14,415	4,886	122,118	154	367	1	7	6,045	3,628	62
Totals,	Luzerne,	146,736	21,101	5,753	173,590		553	2	9	8,723	4,527	91
Murrays,	Northern Anthracite Coal Co.	130,775	5,000	1,895	137,670	165	222		1	4,553	1,500	27
O'Boyle-Foys,	O'Boyle-Foy Anthracite Coal Co.	89,992	3,750	1,645	95,387	179	210			1,043	550	14
Austin Tunnel,	Austin Coal Co.	32,553	3,900	1,920	38,673	176	145	2		1,881	178	12
Katy-Did,	Robertson and Law	18,562	2,300	4,067	24,959	132	101			528	6,372	18
Brookside Washery,	Brookside Coal Co.	11,887	3,750	783	16,420	105	23					
Randall and Schaad Brothers		2,912	1,000	626	4,538	103	29			253		2
Grand totals,		3,698,140	260,066	50,957	4,009,163		8,334	28	53	149,954	99,289	599

TABLE 2.—Part 2

Names of Operators	County	Number of Boilers				Locomotives			Number of steam engines of all classes	Total horse power	Number of pumps delivering water to surface	Capacity in gallons per minute	Quantity delivered to surface per minute—gallons	Number of electric dynamos	Number of air compressors
		Cylindrical	Horse power	Tubular	Horse power	Steam	Alt	Electric							
Pennsylvania Coal Co.,	Lackawanna,	---	4,320	20	4,320	6	---	34	42	2,124	13	16,136	7,300	4	1
Delaware, Lackawanna and Western Railroad Co.,	Luzerne,	23	3,655	22	4,115	1	---	17	77	4,379	8	9,269	4,135	3	---
Jermyn and Co.,	Lackawanna,	15	1,050	7	1,350	---	---	---	28	2,122	2	10,000	7,000	---	---
Elliott McClure and Co.,	Lackawanna,	---	1,200	3	1,200	---	---	---	20	1,550	1	2,500	1,500	---	1
Connell Anthracite Mining Co.,	Sullivan,	---	1,600	6	1,600	3	---	8	13	1,500	1	600	500	5	---
Hillside Coal and Iron Co.,	Luzerne,	8	400	5	400	---	---	1	19	600	1	600	600	1	1
Hudson Coal Co.,	Lackawanna,	9	885	8	1,255	2	---	---	28	1,125	3	2,300	1,100	---	1
Northern Anthracite Coal Co.,	Luzerne,	---	400	4	400	---	---	---	5	400	1	1,174	587	---	---
O'Boyle-Foy Anthracite Coal Co.,	Sullivan,	---	750	4	750	---	---	---	7	500	---	60	40	---	---
Austin Coal Co.,	Lackawanna,	7	450	3	590	1	---	---	8	270	---	550	200	---	---
Robertson and Law,	Lackawanna,	---	460	6	460	1	---	---	9	245	3	450	250	---	1
Brookside Coal Co.,	Lackawanna,	---	250	4	250	---	---	---	8	160	---	---	---	---	---
Randall and Schaad Brothers,	Sullivan,	---	80	1	80	---	---	---	1	80	1	250	250	---	---
Totals,	---	62	1,330	93	15,600	14	---	60	265	14,555	35	43,280	23,462	13	6

Table 3.—Number of each class of employes inside and outside of mines

Names of Operators and Collieries	County	Inside										Outside							Grand total inside and outside		
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Doorboys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Foremen	Blacksmiths and carpenters	Enginers and firemen	Slate pickers (boys)	Slate pickers (men)		Bookkeepers and clerks	All other employes	Total outside
Pennsylvania Coal Co. Old Forge, Central,	Lackawanna,	3	7	---	378	290	58	41	8	168	65	1,018	---	1	22	23	98	25	3	122	294
	Luzerne,	2	5	---	196	189	33	22	4	86	18	555	---	1	13	19	80	24	2	124	263
	Central,	5	12	---	574	479	91	63	12	254	83	1,573	---	2	35	42	178	49	5	246	557
Washeries Old Forge, Central,	Lackawanna,	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	4	---	---	7	11
	Luzerne,	---	---	---	---	---	---	---	---	---	---	---	---	---	2	---	---	---	8	25	35
	Central,	---	---	---	---	---	---	---	---	---	---	---	---	---	---	2	---	---	---	32	46
Totals, Delaware, Lackawanna and Western Railroad Co.	Lackawanna,	5	12	---	574	479	91	63	12	254	83	1,573	---	2	35	44	182	57	5	278	603
	Luzerne,	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	Central,	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Pyne, Taylor, Hallstead,	Lackawanna,	1	1	6	195	195	31	5	3	58	113	608	---	1	9	12	43	33	3	85	186
	Luzerne,	2	1	3	211	217	18	12	4	8	93	569	---	1	6	16	55	10	3	80	171
	Hallstead,	1	---	2	116	110	53	9	4	48	4	347	---	1	4	16	34	---	1	54	110
Pyne Washery, Totals,	Lackawanna,	4	2	11	522	522	102	26	11	114	210	1,524	---	3	19	44	132	43	7	219	467
	Luzerne,	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	Central,	4	2	11	522	522	102	26	11	117	210	1,527	---	4	19	49	132	45	8	246	503
Totals,	Lackawanna,	4	2	11	522	522	102	26	11	117	210	1,527	---	4	19	49	132	45	8	246	503
Totals,	Lackawanna,	4	2	11	522	522	102	26	11	117	210	1,527	---	4	19	49	132	45	8	246	503
Totals,	Lackawanna,	4	2	11	522	522	102	26	11	117	210	1,527	---	4	19	49	132	45	8	246	503
Totals,	Lackawanna,	4	2	11	522	522	102	26	11	117	210	1,527	---	4	19	49	132	45	8	246	503
Totals,	Lackawanna,	4	2	11	522	522	102	26	11	117	210	1,527	---	4	19	49	132	45	8	246	503
Totals,	Lackawanna,	4	2	11	522	522	102	26	11	117	210	1,527	---	4	19	49	132	45	8	246	503
Totals,	Lackawanna,	4	2	11	522	522	102	26	11	117	210	1,527	---	4	19	49	132	45	8	246	503
Totals,	Lackawanna,	4	2	11	522	522	102	26	11	117	210	1,527	---	4	19	49	132	45	8	246	503
Totals,	Lackawanna,	4	2	11	522	522	102	26	11	117	210	1,527	---	4	19	49	132	45	8	246	503
Totals,	Lackawanna,	4	2	11	522	522	102	26	11	117	210	1,527	---	4	19	49	132	45	8	246	503
Totals,	Lackawanna,	4	2	11	522	522	102	26	11	117	210	1,527	---	4	19	49	132	45	8	246	503
Totals,	Lackawanna,	4	2	11	522	522	102	26	11	117	210	1,527	---	4	19	49	132	45	8	246	503
Totals,	Lackawanna,	4	2	11	522	522	102	26	11	117	210	1,527	---	4	19	49	132	45	8	246	503
Totals,	Lackawanna,	4	2	11	522	522	102	26	11	117	210	1,527	---	4	19	49	132	45	8	246	503
Totals,	Lackawanna,	4	2	11	522	522	102	26	11	117	210	1,527	---	4	19	49	132	45	8	246	503
Totals,	Lackawanna,	4	2	11	522	522	102	26	11	117	210	1,527	---	4	19	49	132	45	8	246	503
Totals,	Lackawanna,	4	2	11	522	522	102	26	11	117	210	1,527	---	4	19	49	132	45	8	246	503
Totals,	Lackawanna,	4	2	11	522	522	102	26	11	117	210	1,527	---	4	19	49	132	45	8	246	503
Totals,	Lackawanna,	4	2	11	522	522	102	26	11	117	210	1,527	---	4	19	49	132	45	8	246	503
Totals,	Lackawanna,	4	2	11	522	522	102	26	11	117	210	1,527	---	4	19	49	132	45	8	246	503
Totals,	Lackawanna,	4	2	11	522	522	102	26	11	117	210	1,527	---	4	19	49	132	45	8	246	503
Totals,	Lackawanna,	4	2	11	522	522	102	26	11	117	210	1,527	---	4	19	49	132	45	8	246	503
Totals,	Lackawanna,	4	2	11	522	522	102	26	11	117	210	1,527	---	4	19	49	132	45	8	246	503
Totals,	Lackawanna,	4	2	11	522	522	102	26	11	117	210	1,527	---	4	19	49	132	45	8	246	503
Totals,	Lackawanna,	4	2	11	522	522	102	26	11	117	210	1,527	---	4	19	49	132	45	8	246	503
Totals,	Lackawanna,	4	2	11	522	522	102	26	11	117	210	1,527	---	4	19	49	132	45	8	246	503
Totals,	Lackawanna,	4	2	11	522	522	102	26	11	117	210	1,527	---	4	19	49	132	45	8	246	503
Totals,	Lackawanna,	4	2	11	522	522	102	26	11	117	210	1,527	---	4	19	49	132	45	8	246	503
Totals,	Lackawanna,	4	2	11	522	522	102	26	11	117	210	1,527	---	4	19	49	132	45	8	246	503
Totals,	Lackawanna,	4	2	11	522	522	102	26	11	117	210	1,527	---	4	19	49	132	45	8	246	503
Totals,	Lackawanna,	4	2	11	522	522	102	26	11	117	210	1,527	---	4	19	49	132	45	8	246	503
Totals,	Lackawanna,	4	2	11	522	522	102	26	11	117	210	1,527	---	4	19	49	132	45	8	246	503
Totals,	Lackawanna,	4	2	11	522	522	102	26	11	117	210	1,527	---	4	19	49	132	45	8	246	503
Totals,	Lackawanna,	4	2	11	522	522	102	26	11	117	210	1,527	---	4	19	49	132	45	8	246	503
Totals,	Lackawanna,	4	2	11	522	522	102	26	11	117	210	1,527	---	4	19	49	132	45	8	246	503
Totals,	Lackawanna,	4	2	11	522	522	102	26	11	117	210	1,527	---	4	19	49	132	45	8	246	503
Totals,	Lackawanna,	4	2	11	522	522	102	26	11	117	210	1,527	---	4	19	49	132	45	8	246	503
Totals,	Lackawanna,	4	2	11	522	522	102	26	11	117	210	1,527	---	4	19	49	132	45	8	246	503
Totals,	Lackawanna,	4	2	11	522	522	102	26	11	117	210	1,527	---	4	19	49	132	45	8	246	503
Totals,	Lackawanna,	4	2	11	522	522	102	26	11	117	210	1,527	---	4	19	49	132	45	8	246	503
Totals,	Lackawanna,	4	2	11	522	522	102	26	11	117	210	1,527	---	4	19	49	132	45	8	246	503
Totals,	Lackawanna,	4	2	11	522	522	102	26	11	117	210	1,527	---	4	19	49	132	45	8	246	503
Totals,	Lackawanna,	4	2	11	522	522	102	26	11	117	210	1,527	---	4	19	49	132	45	8	246	503
Totals,	Lackawanna,	4	2	11	522	522	102	26	11	117	210	1,527	---	4	19	49	132	45	8	246	503
Totals,	Lackawanna,	4	2	11	522	522	102	26	11	117	210	1,527	---	4	19	49	132	45	8	246	503
Totals,	Lackawanna,	4	2	11	522	522	102	26	11	117	210	1,527	---	4	19	49	132	45	8	246	503
Totals,	Lackawanna,	4	2	11	522	522	102	26	11	117	210	1,527	---	4	19	49	132	45	8	246	503
Totals,	Lackawanna,	4	2	11	522	522	102	26	11	117	210	1,527	---	4	19	49	132	45	8	246	503
Totals,	Lackawanna,	4	2	11	522	522	102	26	11	117	210	1,527	---	4	19	49	132	45	8	246	503
Totals,	Lackawanna,	4	2	11	522	522	102	26	11	117	210	1,527	---	4	19	49					

TABLE 3.—Part 2

Names of Operators and Colleries	County	Number of Days Worked in Breaker												Total
		January	February	March	April	May	June	July	August	September	October	November	December	
Old Forge, Pennsylvania Coal Co.	Lackawanna, ---	23	19	24	24	24	26	16	16	5	21	19	17	234
Central, ---	Luzerne, ---	23	21	23	25	23	25	18	19	20	22	21	15	259
Delaware, Lackawanna and Western Railroad Co.	Lackawanna, ---	25	24	23	25	24	23	23	17	24	---	17	25	250
Fyne, ---	Lackawanna, ---	21	20	22	21	23	22	17	11	6	20	22	21	226
Taylor, ---	Lackawanna, ---	22	19	21	18	21	20	21	21	13	---	---	---	176
Hallstead, ---	Luzerne, ---	---	---	---	---	---	---	---	---	---	---	---	---	---
Jermyn Nos. 1, 2 and 3, Jermyn and Co.	Lackawanna, ---	22	20	21	19	22	20	16	18	19	21	20	19	237
Sibley, ---	Lackawanna, ---	20	21	23	20	22	21	20	20	23	21	20	23	254
Connell Anthracite Mining Co.	Sullivan, ---	24	23	23	23	21	25	10	18	16	22	23	24	252
Hillside Coal and Iron Co.	Luzerne, ---	20	19	18	20	20	21	14	17	13	21	20	20	223
Spring-Brook, Hudson Coal Co.	Lackawanna, ---	12	11	10	9	7	9	8	9	7	9	8	8	107
Laugchill, ---	Luzerne, ---	13	13	14	12	12	13	13	12	14	13	13	12	154
Murrays, Northern Anthracite Coal Co.	Sullivan, ---	21	22	14	14	12	8	7	9	8	16	18	16	165
O'Boyle-Foy Anthracite Coal Co.	Sullivan, ---	20	18	11	14	9	7	13	18	14	17	18	20	179

Austin Tunnel, -----	Lackawanna, -----	19	18	4	13	15	17	11	16	18	16	15	14	176
Katy-Did, -----	Lackawanna, -----	28	24	27	15	11	14	13						132
Randall and Schaad, -----	Sullivan, -----	23	23	12								22	23	108
Austin Coal Co. -----														
Robertson and Law -----														
Randall and Schaad Brothers -----														

TABLE 4.—Fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Mine	County	Nature and Cause of Accident in Brief
Jan. 22	John Sibley, -----	English, ----	Miner, -----	39	M.	1	----	Old Forge No. 2, --	Lackawanna, -	Fatally injured by fall of rock in Five Foot vein. He had stood a prop under the roof which he knew was unsafe. He then fired a shot which dislodged the prop, and while he was re-standing it, the rock fell on him. Instantly killed in Clark vein. He was riding on the front end of a motor, taking a trip of loaded cars down a hill when in some unknown manner he lost his balance. The cars were ahead of the motor and he tried to catch a hold of one of them, but missed it and fell and was run over by the motor. Every effort is being made to keep boys out of the head end of motors and cars.
29	John Zudrow, -----	Polish, ----	Brakeman, --	18	S.	-----	-----	Old Forge drifts, -	Lackawanna, -	Fatally injured by fall of roof in Monkey vein. He had fired a blast which dislodged some props. He did not examine the roof or restand the props, but began to drill another hole when the roof fell on him. Died February 19.
Feb. 1	Mike Losock, -----	Russian, ---	Miner, -----	23	M.	1	----	Jermyn No. 1, ----	Lackawanna, -	Fatally injured by fall of bony roof in Clark vein. The miner had sounded the roof and thought it safe, and after having fired two shots was drilling a third hole when the roof fell and caught Poeblich, who was loading a car.
4	John Foblich, -----	Slavonian,	Laborer, ----	21	M.	1	----	Hallstead, -----	Luzerne, -----	

Feb. 10	Andrew Sulka, -----	Polish, ----	Laborer, ----	40	S. -----	Jermyn No. 2, ----	Lackawanna, -	Fatally injured by flying coal from blast. His miner was about to fire a blast and told him to go down the chamber into the cross-cut for protection and to warn any one who might approach that he was about to fire. The miner fired the blast, and as Sulka did not return he went to look for him and found him in the middle of the road where he had been struck by the flying coal. Sulka should have remained in the cross-cut.
15	Stephen Donovan, ---	Irish,-----	Driver, -----	19	S. -----	Old Forge No. 2,--	Lackawanna, -	Fatally injured in Five Foot vein. He was employed temporarily as a brakeman and was fixing his lamp on the gangway when the motorman was taking a car to the face of the chamber near by. When the motor came back Donovan jumped on the front end of it, but as it struck the latches he was thrown off and was crushed under the motor.
20	Mick Kokinda, -----	Polish, ----	Driver, -----	18	S. -----	Sibley, -----	Lackawanna, -	Fatally injured. Kicked by mule while taking it to the barn after he had finished work. He was found by the assistant foreman who was on his way out of the mine. Died the next day.
20	Joseph Pationate, --	Italian, ----	Miner, -----	55	M. 1 -----	Old Forge No. 2,--	Lackawanna, -	Instantly killed. He was on his way home, and as he approached the foot of the shaft he saw some men about to be hoisted and ran to the cage, which the engineer had been signaled to hoist. The footman called to Pationate to stop and tried to catch him, but Pationate sprang for the cage and before the footman could have the cage stopped he had been crushed between it and the roof.
Mar. 14	Paul Hood, -----	American,---	Miner, -----	45	M. 1 -----	Connells, -----	Sullivan, -----	Killed by fall of roof. He had been requested by the machine men to prope the roof which was considered dangerous and they refused to cut the face until he would do so. He, however, did not think it was necessary and was caught by the fall.

TABLE 4—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Mine	County	Nature and Cause of Accident in Brief
Mar. 24	Benjamin Sedlisky, ---	Polish, ---	Slatepicksler,	15	S. -----	-----	-----	-----	Luzerne, -----	Killed by being wound around shaft in breaker. He was employed at the head of the breaker near the tipple. There was a shortage of coal and the breaker machinery had slowed down, so he left his place and went up into a part of the breaker where no one worked. There was a window there before which a shaft revolved. The gearing on the shaft and also the machinery were fenced off, but not the bare shaft. His father missed him and in his search found his body revolving around the shaft. It is supposed that while looking out of the window he leaped against the shaft, which caught his clothing.
April 13	Cashmere Dranbaw,---	Polish, -----	Laborer, -----	56	M. 1 -----	-----	-----	Jermyn No. 1, ---	Lackawanna, -	Fatally injured. Run over by mine cars. He was standing on a track for loaded cars lighting a pipe. Two companions called to him that a trip of cars was coming, but he evidently didn't hear for he turned around just as the cars struck him. He had been warned that the cars were coming. Outside.
30	Joseph Bartuska, ----	Polish, -----	Loader, -----	17	S. -----	-----	-----	Hallstead, -----	Luzerne, -----	Killed by fall of rock in chamber while leading his mules. The miner had examined the roof repeatedly, but found nothing to indicate a dangerous condition. The fall was caused by a ship, which became detached.

April 30	Joseph Cola,	-----	Italian, ----	Statepiker,	15	S.	-----	Austin, -----	Lackawanna, -	<p>Killed by a revolving shaft in gable of the breaker traveling at a speed of 120 revolutions per minute. He was found by the other on his rounds to oil the machinery and his body was still in motion with the shaft. It is not known why the boy crawled up into the small space in which the shaft revolved. His business was to pick slate and to attend to the top of the elevators when they became blocked.</p>	
May 19	David Herst,	-----	American, --	Miner, -----	45	M.	1	3	Connell, -----	Sullivan, -----	<p>Fatally injured by fall of top coal. He was loading a car from the bottom bench when the overhanging top bench fell and crushed him against the car.</p>
26	Stephen Kasparovitch,	-----	Polish, ----	Laborer, ----	40	M.	1	3	Spring-Brook, ----	Lackawanna, -	<p>Killed by fall of roof. A blast had dislodged the props that supported it and his miner was re-standing them when the fall occurred. His head was crushed and he died half an hour later.</p>
June 25	Stanley Minillis,	-----	Polish, ----	Miner, -----	52	M.	1	4	Consolidated, ----	Luzerne, -----	<p>Fatally injured by cars. While on his way to his working place he jumped on the bumper of the first car of a trip of empties as it passed him. When the trip had gone about one hundred feet the mines stopped and his body was found under the cars. How he fell under the cars was unknown. He was removed to his home and later to the hospital where he died June 27.</p>
26	Robert Fox,	-----	Irish, -----	Driver boss, --	38	S.	-----	Hallstead, -----	Luzerne, -----	<p>Instantly killed by trip of cars. He with other drivers and runners was watching a trip of cars being lowered by a rope on the cut-off near by when in some manner the cars became derailed and buckled up and ran into Fox who was standing along the rib nine feet away.</p>	
29	John Kowlas,	-----	Polish, ----	Laborer, ----	30	S.	-----	Jermyn No. 1, ---	Lackawanna, -	<p>Instantly killed by fall of roof while assisting a driver in pushing a car on the rib side. The roof at that point had been examined just a few hours previous to the accident.</p>	
July 28	Frank Foot,	-----	Austrian, --	Miner, -----	32	M.	1	-----	Jermyn No. 1, ---	Lackawanna, -	<p>Fatally injured by blast. He had drilled a hole in the nose of the pillar and had tamped and fired it. He then went to the other side of the pillar and had about opposite the hole, for protection. When the blast exploded he was so seriously injured by the force of it that he died the same night.</p>

TABLE 4—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Mine	County	Nature and Cause of Accident in Brief
July 31	John Golden, -----	Irish,-----	Door boy, ---	16	S.	-----	-----	Central Lawshaft,	Luzerne, -----	Fatally injured in fifth lift of Red Ash vein. He left his work and ran through a cross-cut into a chamber that was parallel to the gangway on which his door was located. When he reached the chamber a motorman and his brakeman were pushing two empty cars to the face of the chamber. He jumped on the rear end of the motor and when he had gone but a short distance the power became weak and the cars pushed it back down the hill. His body was found under the motor. He had either fallen or had been knocked off.
Aug. 28	Andrew Novak, -----	Polish,-----	Laborer, ---	27	S.	-----	-----	Sibley, -----	Lackawanna, -	Killed by fall of rock in Third vein, dip road. While he was waiting to load a car a piece of top rock became loose and fell on him. His position and tools indicated that he was barring out a shot at the time.
Oct. 8	Joseph Storosak, ---	Slavonian, -----	Miner, -----	28	M.	1	-----	Jermyn No. 3, ---	Lackawanna, -	Killed by fall of top coal in Clark vein. He had fired a shot in the bottom bench and was barring it out when the protruding top bench began to crack and fell on him. The laborers had called his attention to its condition, but he continued to work.
30	Eugani Nicola, -----	Italian,-----	Laborer, ---	24	M.	1	-----	Old Forge No. 1,--	Lackawanna, -	Killed by fall of protruding bench of top coal in Clark vein while removing coal from the face. Both the assistant foreman and miner had examined the place.

Nov. 3	Anthony Kotnovoesky, Polish, -----	Miner, -----	22	S.	Jermyn No. 1, --- Lackawanna, -	Killed by fall of roof rock at face of his working place, Monkey vein. While barring out a shot he released a slip which fell on him. The place had been examined a few hours before by the assistant foreman.
18	Stephen Reynolds, ----	Welsh, -----	24	S	Taylor, ----- Lackawanna, -	Fatally injured. He and a motorman were working on the night shift and the motor was pulling four empty cars along the gangway road. The motorman told Reynolds to uncouple the cars, which he did and then jumped on the motor. The motorman ran past the switch the regular distance and stopped his motor, and as he looked back he saw the first car jump up. As he could not see his brakeman he ran back and found that the first car had passed over his head and neck. It is supposed that in jumping off at the switch to turn the latch he fell and struck his head on the rail and was rendered unconscious, and the cars passed over him.
26	Charles Schwieder, ---	Polish, -----	16	S	Austin, ----- Lackawanna, -	Fatally injured in rolls. He was employed on a platform that was securely boarded four feet high on three sides, the entrance to it being on the fourth side. At right angles to the platform and passing under it was a chute leading to the rolls. It was the boy's duty to keep the chute running in the chute. In some unknown manner he fell into the chute and passed under the covering into the rolls. He called for help, but before he could be taken out his one leg to the hip and the other foot were ground to a pulp. He died a few hours later.
Dec. 4	Frank Zallinsky, -----	Polish, -----	40	1 1	Jermyn No. 1, --- Lackawanna, -	Killed by fall of roof at face of working place in Clark vein. His miner had fired a blast and they returned to the pillar along the rib to see the result. The blast had discharged three or four props which caused the roof to fall injuring Zallinsky. He died a few hours later.

TABLE 4—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Mine	County	Nature and Cause of Accident in Brief
Dec. 11	William Paturich, ---	Polish, ----	Miner, -----	30	M.	1	1	Langcliff, -----	Luzerne, -----	Fatally injured by fall of top bench coal in Checker vein of No. 1 drift. He had prepared a hole in the coal ready to fire, but had not stood, any props under it. While he was working on the bottom bench the top bench coal fell on him. Another miner told him to shoot the coal down before beginning to work under it, but he would not do so.

TABLE 5.—Non-fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or Single	Name of Mine	County	Nature and Cause of Accident in Brief
Jan. 3	George Wilder, -----	American,--	Miner, -----	55	M.	Spring-Brook, -----	Lackawanna, ---	Left foot fractured by fall of roof.
6	Ray Akens, -----	American,--	Miner, -----	23	S.	Consolidated Slope,-----	Luzerne, -----	Face burned by powder from premature explosion while pushing powder in hole with scraper.
9	Archie Hay, -----	Scotch,-----	Pump runner,-----	70	S.	Connells, -----	Sullivan, -----	Left arm crushed. Was caught in gearing of electric pump that was not protected as prescribed by law.
10	Frank Manz, -----	Italian,----	Miner, -----	40	M.	Jermyn No. 1, -----	Lackawanna, ---	Leg broken and head and face cut. While he was knocking out a prop the top coal that it supported fell on him.
15	Frank Frost, -----	American,--	Miner, -----	39	M.	Consolidated,-----	Luzerne, -----	Nose broken and face cut. While he was working out a shot a second explosion occurred.
Feb. 8	John Conjutine, -----	Italian,----	Laborer, -----	21	S.	Connells, -----	Sullivan, -----	Right leg broken below knee. Struck by fall of coal at face.
12	Luke Welkus, -----	Russian,----	Miner, -----	33	M.	Consolidated,-----	Luzerne, -----	Left leg fractured about six inches above ankle. Struck by fall of rock at face.
17	Anthony Frende, -----	Polish,----	Laborer, -----	26	M.	Langcliff, -----	Luzerne, -----	Received a compound fracture of left leg. While barring a piece of rock it fell and caught him.
24	Charles Combers, -----	English,----	Laborer, -----	25	M.	Taylor, -----	Lackawanna, ---	Body bruised. Fell from his trip of cars on plane.
27	James L. Jones, -----	Welsh,-----	Miner, -----	47	M.	Langcliff, -----	Luzerne, -----	Ribs broken. While running from a shot he tripped and fell.
Mar. 11	Lysle Gore, -----	American,--	Motor helper,-----	22	S.	Connells, -----	Sullivan, -----	Kidney squeezed by runaway cars.
12	Toney Pierro, -----	Italian,----	Machine runner,-----	30	M.	Connells, -----	Sullivan, -----	Ankle broken by fall of roof rock.
14	Charles Hood, -----	American,--	Laborer, -----	18	S.	Connells, -----	Sullivan, -----	Foot crushed by fall of rock that the miner had insisted was safe.
18	John Walsh, Jr., -----	American,--	Motor helper,-----	22	M.	Old Forge No. 1 Shaft,-----	Lackawanna, ---	Spine fractured. Crushed between motor (on which he was sitting) and roof.
24	Frank Choychos, -----	Polish,----	Laborer, -----	30	M.	Central Law Shaft,-----	Luzerne, -----	Hands and face burned by gas.

TABLE 5—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Mine	County	Nature and Cause of Accident in Brief
Mar. 26	Mike Kucenski, -----	Polish, ----	Miner, -----	32	M.	Central No. 13 Shaft,	Luzerne, -----	Both legs broken by blast. The miner had told him to go to a place of safety.
April 3	Patrick McHugh, ----	Irish, -----	Miner, -----	28	M.	Jermyn No. 1, ----	Lackawanna, ----	Left foot broken and head cut by fall of roof while barring down top coal.
4	William Chester, ----	Scotch, ----	Driver, ----	17	S.	Old Forge No. 2, ----	Lackawanna, ----	Right femur and tibia fractured, right shoulder and back bruised, by fall of rock.
4	Raymond Powell, ----	American, --	Runner, ----	17	S.	Langellif, ----	Luzerne, -----	Left foot crushed by cars.
6	Vito Salutaro, ----	Italian, ----	Laborer, ----	26	M.	Spring-Brook, ----	Lackawanna, ----	Right femur fractured by fall of rock while robbing pillars.
May 5	Daniel Evanshiro, ----	Slavonian, --	Laborer, ----	25	M.	Taylor, ----	Lackawanna, ----	Leg broken by runaway car.
7	Anthony Pilardi, ----	Italian, ----	Driver, ----	17	S.	Sibley, ----	Lackawanna, ----	Burned by oil that his companions ignited and hurled at him.
20	Edward Zarkofski, ----	Polish, ----	Driver, ----	16	S.	Langellif, ----	Luzerne, -----	Received a compound fracture of left leg. He slipped while coupling cars and the bumper caught his leg, scalp and the bumper caught his leg, scalp wounded, fore-finger cut off left hand at first joint, ankle injured by fall of rock that his miner had neglected to take down.
20	John Potkul, ----	Polish, ----	Laborer, ----	33	M.	Pyne, ----	Lackawanna, ----	Leg broken. Caught between mule and stretcher.
June 6	Michael Finan, ----	Irish, -----	Driver, ----	67	M.	Murrays, ----	Sullivan, -----	Leg sprained. He climbed over a fence to recover his bat and jumped into a hole. Outside.
23	Joseph Bullock, ----	English, ----	Slate picker, ----	16	S.	Pyne, ----	Lackawanna, ----	Back and chest bruised. While he was tipping a car on the rock dump, it ran back and struck him. Outside.
24	Frank Choley, ----	Russian, ----	Rock dumper, ----	24	S.	Jermyn No. 1, ----	Lackawanna, ----	

July	20	Paul Butler,	Polish,	Brakeman,	40	M. Taylor,	Lackawanna,	Leg smashed and amputated. As he was going toward a moving car to fix a coupling, his foot caught in a switch. Outside.
	24	Alexander Zelinsky,	Polish,	Motorman,	20	S. Old Forge, Clark Drift.	Lackawanna,	Leg fractured at thigh. While pushing a light car with a motor, he rested his foot on the car which became derailed and caught his leg.
	27	Stanley Coluskie,	Polish,	Motorman,	22	S. Old Forge, Marcy Drift.	Lackawanna,	Blood vessel burst. While running his motor at an unusual speed, the car became derailed, wedging him between it and motor.
Aug.	1	Thomas Nicholson,	American,	Trip rider,	17	S. Langcliff,	Luzerne,	Small bone in left leg broken; car tipped on curve. Outside.
	12	John Dodach,	Polish,	Miner,	23	M. Old Forge Drift,	Lackawanna,	Right thigh broken by fall of soap-stone. He had fired two shots simultaneously, and when he returned to the face before the smoke had cleared the rock fell on him.
	20	Alexander Serkofski,	Polish,	Miner,	27	M. Langcliff,	Luzerne,	Knee cut. While cutting a timber the ax slipped.
Sept.	8	Joe Bershiskie,	Polish,	Miner,	29	M. Old Forge No. 1,	Lackawanna,	Severe contusion of the spine by fall of rock while replacing a discharged prop.
	17	Jenkin Davis,	American,	Driver,	18	S. Pyne,	Lackawanna,	Right leg fractured. Caught between mule and car on which he was standing.
	21	Hubert Yearsley,	American,	Laborer,	28	S. Pyne,	Lackawanna,	Internally injured by fall of rock that he and his miner had tried to prop.
	20	William Burnside,	English,	Miner,	56	M. Sibley,	Lackawanna,	Compound fracture of wrist and face burned by premature blast.
Oct.	10	Fred Savnoski,	German,	Machine helper,	25	M. Connells,	Sullivan,	Right leg badly crushed below knee by fall of top coal.
	20	Henry Snyder,	German,	Carpenter,	50	M. Jermyu No. 2,	Lackawanna,	Collar bone and rib broken. Carpenter erected some frame work which did not clear the car, collision occurred and he was injured as stated. Outside.
	31	Stanley Yabchunke,	Polish,	Laborer,	19	S. Langcliff,	Luzerne,	Right leg fractured and ankle sprained. Jumped on car bumper while car was in motion.
Nov.	11	John Novaok,	Austrian,	Laborer,	54	M. Central,	Luzerne,	Hip dislocated. While he was digging a foundation, the frame slipped. Outside.
	13	Thomas Thomas,	Welsh,	Brakeman,	20	S. Taylor,	Lackawanna,	Right leg broken. Was standing between cars when they were bumped.
	16	Dominic Marth,	Italian,	Miner,	23	S. Old Forge No. 1 Shaft.	Lackawanna,	Right leg fractured by fall of rock.
	21	Toney Muscarell,	Italian,	Laborer,	51	M. Connells,	Sullivan,	Right thigh broken while trying to hold moving car.
	25	Joseph Simotoskia,	Polish,	Miner,	34	M. Central Law Shaft,	Luzerne,	Received contusions of back and was internally injured by fall of rock.

TABLE 5—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Mine	County	Nature and Cause of Accident in Brief
Dec. 5	John Roumanak, ----- Frank Minanto, -----	Slavonian, American,--	Laborer, ----- Slate picker, -----	34 14	M. S.	Sibley, ----- Old Forge Washery,--	Lackawanna, --- Lackawanna, ---	Internally injured by fall of roof. Left leg broken. Slipped in a chute while trying to start some coal and his foot was caught in an idler wheel. Outside. Back broken by fall of roof that he had neglected to prop.
10	Anthony Cassel, -----	Italian, ---	Miner, -----	38	M.	Old Forge, Clark Drift.	Lackawanna, ---	Received a compound fracture of right leg by fall of coal at face.
14	John Kurash, -----	Polish, ---	Miner, -----	42	M.	Pyne, -----	Lackawanna, ---	Right foot cut off at ankle by motor.
15	Alfred Salmon, -----	American,--	Motor helper, --	22	M.	Pyne, -----	Lackawanna, ---	He was running ahead of the motor when, he claims, he received a shock and fell.
16	Harry Goodwin, -----	American,--	Motor helper, --	22	S.	Pyne, -----	Lackawanna, ---	Finger of right hand amputated. Caught between bumper of a car that was in motion and a piece of coal.
16	Frank Beickler, -----	American,--	Motorman, -----	27	M.	Pyne, -----	Lackawanna, ---	Thumb of right hand amputated.
18	Peter Billinek, -----	Austrian, --	Laborer, -----	40	M.	Pyne, -----	Lackawanna, ---	Caught between couplings of cars. Face, neck and hands burned while turning stream of water on burning culm dump. Outside.

CONDITION OF COLLIERIES AND IMPROVEMENTS

PENNSYLVANIA COAL COMPANY

At Central Colliery, an improvement has been made in the matter of access to the ash pit of the boiler house. Previously there has been but one end open, the other being walled, and the whole ventilated by a steam jet blowing in a stack. The new arrangement does away with that, and the pit is now open from both ends admitting a free passage of pure air.

An egg shaped concrete water course about a mile long, constructed through the workings of both Central and Old Forge collieries, gathers the water from these workings and delivers it to a very modern and unsurpassed pumping plant at No. 2 shaft.

The No. 2 Old Forge shaft has been idle since June and the plant and workings have been completely overhauled. The shaft is now concreted from bed-rock and raised to accommodate a grade, which permits the abandonment of the old grade crossing for mine cars on the main road, the cars now being conducted over a new steel and concrete bridge. A new steel tower has been erected to replace the old one, and also a new brick engine house and hoisting engine. At the Mountain drifts a new shaft has been sunk to the Dunmore vein tapping the advanced workings of No. 2 shaft, a 20 foot fan, electrically propelled, has been installed and encased in a brick engine and fan house, and also a fan drift, which guarantee an adequate supply of ventilation. The new shaft is used for an upcast exclusively, while the old fan shaft at No. 2 provides an additional down-cast.

I consider the Pennsylvania collieries, Old Forge and Central, to rank with the very best in my district.

DELAWARE, LACKAWANNA AND WESTERN RAILROAD COMPANY

The Hallstead Colliery was closed down in September, after a conference with the Inspector, it being decided to take up the matter of some much needed improvements. Mining is suspended, but a force of men are regularly employed thus far making the changes referred to. The Pyne and Taylor collieries, which were transferred to me April 1, 1908, from the Fourth district, are in good condition. A new fan shaft is being sunk at the Pyne to supply ventilation to the Dunmore veins, which will later be developed, and a 20 foot fan will be installed thereon.

JERMYN AND COMPANY

At Jermyrn Collieries a new pump has been installed at No. 2 shaft to return the water from the washery, the silt being run into the old workings. A new washery has been completed near No. 1 breaker; here the silt is first deposited in a settling tank, and the water passes off into the creek, it being first supplied from the Clark vein in No. 3 shaft by the big pump, which delivers it to the top of the washery over one thousand feet removed from the shaft.

I consider these mines in a very satisfactory condition when the fact that there are over two hundred numbers robbing is taken into consideration. Every suggestion of the Inspector is carried out faithfully by a corps of competent officials with a superintendent who is constantly trying to improve matters.

ELLIOTT McCLURE AND COMPANY

The Sibley Mine has made an excellent record during the year. The two upper veins are being robbed and every precaution is employed to protect the workmen. The lower veins have been developed to a point where they supply a generous proportion of the total output.

Ventilation and drainage are good.

CONNELL ANTHRACITE MINING COMPANY

Connells Colliery made a very good showing for the year. A man-way was constructed from the shaft through the workings to the surface. This was very much needed, as it keeps the employes from the haulage road, and does away with the man holes. Ventilation and drainage good.

HILLSIDE COAL AND IRON COMPANY

The Consolidated Colliery has added another feeder in the addition of Cotters slope, a new opening driven to the surface vein for the purpose of robbing pillars. Considerable second mining is also being done in the shaft and slope workings. Ventilation and drainage good.

HUDSON COAL COMPANY

Surig-Brook and Langeliff are old collieries. The second mining at Spring-Brook will be nearly completed during the coming year. At Langcliff the territory is very large and the workings very old. Occasionally squeezes occur, which are handled in a very safe and practical way. Ventilation and drainage good.

NORTHERN ANTHRACITE COAL COMPANY

Murrays Colliery is being continually improved as to roads, drainage and ventilation. No fatal accident has occurred at this colliery during my three years of office, although the Sullivan county collieries have a very bad falling roof to the B or principal vein. This speaks volumes for both officials and employes.

O'BOYLE-FOY ANTHRACITE COAL COMPANY

O'Boyle-Foys Colliery. The management exercises the greatest care and no fatal accident has occurred at this colliery during the past three years. About three miles of tail and main rope have been in stalled for transportation. Ventilation and drainage good.

AUSTIN COAL COMPANY

Austin Colliery is reduced to second mining almost exclusively. I do not recall a fatal accident inside for the past three years. However, there were two very unfortunate accidents outside during the

past year, which might properly be attributed to a lack of thoughtfulness and sufficient care on the part of the youthful victims.

Ventilation and drainage fair.

ROBERTSON AND LAW

The Victor slope was abandoned during the summer months, as the vein was so thin that it was impracticable to mine it at that time. The washery worked until August, when everything was shut down. The operators have not determined upon the future of this colliery.

RANDALL AND SCHAAD BROTHERS

Randall and Schaads.—A slope has been driven to the B vein, which opens up some more ground. As this is a small operation, little, if anything, is done during the summer months. There have been no accidents of any kind. The general condition is good.

BROOKSIDE COAL COMPANY

Brookside Washery has about completed its labor, and the management is looking for other fields for future operation.



Sixth District

LUZERNE COUNTY

Pittston, Pa., February 15, 1909.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor of transmitting herewith my annual report as Inspector of Mines of the Sixth Anthracite District for the year ending December 31, 1908. The report gives the statistical information as required by law, also a brief description of the fatal and non-fatal accidents that occurred during the year, with other useful information.

Many of the mines suffered severely during the year from lack of water and a number of them were obliged to suspend temporarily.

The Lafin colliery of the Hudson Coal Company was idle from August 16 to November 1 on this account. Seven hundred men and boys were deprived of employment by this suspension, but the company kept the pumps and fans running by water shipped in tanks by railroad from Carbondale.

The Coal Brook slope of the Mineral Spring colliery, Lehigh Valley Coal Company, was also forced to suspend operations for more than a month on account of their having no water for the boilers.

The Fernwood colliery of the Hillside Coal and Iron Company was obliged to have water shipped in tanks in order to continue operations.

Respectfully submitted,

HUGH McDONALD,
Inspector.

SUMMARY OF STATISTICS

Number of collieries,	14
Number of mines,	39
Number of mines in operation,	37
Number of tons of coal shipped to market,	3,888,639
Number of tons used at mines for steam and heat,	355,129
Number of tons sold to local trade and used by employes,	37,000
Number of tons produced,	4,280,768
Number of tons produced by electrical machines, .....	.....
Number of tons produced by compressed air machines, .....	.....
Number of persons employed inside of mines,	7,723
Number of persons employed outside,	2,538
Number of fatal accidents inside of mines,	36
Number of fatal accidents outside,	5
Number of non-fatal accidents inside of mines,	75
Number of non-fatal accidents outside,	17
Number of tons of coal produced per fatal accident inside,	118,910
Number of persons employed per fatal accident inside,	214
Number of persons employed per fatal accident outside,	507
Number of persons employed per non-fatal accident inside,	103
Number of persons employed per non-fatal accident outside,	149
Number of wives made widows,	25
Number of children orphaned,	60
Number of steam locomotives used outside,	25
Number of compressed air locomotives used inside,	11
Number of electric motors used inside,	36
Number of fans in use,	39
Number of gaseous mines in operation,	19
Number of non-gaseous mines in operation,	18

TABLE A

PRODUCTION OF COAL

Names of Operators

Pennsylvania Coal Company,	2,580,002
Lehigh Valley Coal Company,	507,771
Hillside Coal and Iron Company,	399,865
Hudson Coal Company,	537,835
Delaware and Hudson Company,	121,011
Traders Coal Company,	119,973
Reliance Coal Company,	14,311
Total,	<u>4,280,768</u>

Production by Counties

Luzerne,	<u>4,280,768</u>
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TABLE B.—Fatal and non-fatal accidents inside and outside of mines; number of tons of coal produced per accident; number of persons employed; number employed per accident; number of tons of coal produced per accident; number of employees inside per fatal accident; number of employees outside per fatal accident; number of employees inside per non-fatal accident; number of employees outside per non-fatal accident

Names of Operators	Fatal Accidents			Non-fatal Accidents			Total	Tons of coal produced per fatal accident inside	Tons of coal produced per non-fatal accident inside	Number of employees inside	Number of employees outside	Total number of employees	Number of employees inside per fatal accident		Number of employees outside per fatal accident		Number of employees inside per non-fatal accident		Number of employees outside per non-fatal accident					
	Inside	Outside	Total	Inside	Outside	Total							Fatal	Non-fatal	Fatal	Non-fatal	Fatal	Non-fatal	Fatal	Non-fatal	Fatal	Non-fatal	Fatal	Non-fatal
Pennsylvania Coal Co.,	24	3	27	42	13	55	107,500	61,428	4,003	1,387	5,990	191	462	109	106									
Lehigh Valley Coal Co.,	1	1	2	6	1	7	507,771	84,628	670	260	910	670	260	111	260									
Hillside Coal and Iron Co.,	6	1	6	5	1	6	66,644	79,973	702	288	990	117	110	110	288									
Hudson Coal Co.,	5	1	6	14	1	15	107,567	38,416	1,205	375	1,578	240	375	85	375									
Delaware and Hudson Co.,	---	---	---	6	---	6	20,168	237	237	90	327	---	---	39	---									
Traders Coal Co.,	---	---	---	1	1	2	119,973	241	241	63	306	---	---	241	65									
Reliance Coal Co.,	---	---	---	1	---	1	14,311	67	67	43	110	---	---	67	---									
Totals and averages for district,--	36	5	41	75	17	92	118,910	57,076	7,723	2,538	10,261	214	507	103	149									

TABLE C.—Classification of Fatal Accidents Inside and Outside of Mines

	Months												Totals	Percentages	
	January	February	March	April	May	June	July	August	September	October	November	December			
Causes of Accidents Inside															
Falls of coal, -----			2					2						4	11.11
Falls of roof, -----	3	2		1		2	1	3		2	1			15	41.67
Mine cars, -----	2					1			1			1		5	13.89
Explosions of gas and dust, -----	1	1	1							1				4	11.11
Explosions of powder and dynamite, -----	1			1										2	5.56
Premature blasts, -----		2			1	2								5	13.89
Miscellaneous, -----								1						1	2.77
Totals, -----	7	5	3	2	1	5	1	5	2	3	1	1	36	100.00	
Causes of Accidents Outside															
Cars, -----		1			1						1			3	60.00
Machinery, -----		1												1	20.00
Suffocation in chutes, etc., -----	1													1	20.00
Totals, -----	1	2			1						1		5	100.00	
Grand totals inside and outside, -----	8	7	3	2	2	5	1	5	2	3	2	1	41		

TABLE D.—Classification of Non-fatal Accidents Inside and Outside of Mines

	Months												Totals	Percentages	
	January	February	March	April	May	June	July	August	September	October	November	December			
Causes of Accidents Inside															
Falls of coal, -----	2	1	1	1				1	1					7	9.33
Falls of roof, -----	2	3	1		2	1		1		1	1	4	16	21.33	
Mine cars, -----	1				1	1		2	1	3	4	3	16	21.33	
Explosions of gas and dust, -----	5	1	4		3	1							14	18.67	
Explosions of powder and dynamite, -----					2			1				1	4	5.34	
Premature blasts, -----	2		2	1	1	1	1		1	1	1		11	14.67	
Falling into shafts, -----	1												1	1.33	
Machinery, -----				1									1	1.33	
Miscellaneous, -----	1	1				1			1		1		5	6.67	
Totals, -----	14	6	8	3	9	5	1	5	4	5	7	8	75	100.00	
Causes of Accidents Outside															
Cars, -----			1	3	2	1	1			1		1	10	58.82	
Machinery, -----								1	1	1			3	17.65	
Miscellaneous, -----			1	1		1					1		4	23.53	
Totals, -----			2	4	2	2	1	1	1	2	1	1	17	100.00	
Grand totals inside and outside, -----	14	6	10	7	11	7	2	6	5	7	8	9	92		

TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Mine foremen, -----							1						1
Miners, -----	2	4	2	1	1	2		3		3			18
Miners' laborers, -----	2		1	1		2							8
Drivers and runners, -----	1								1		1		3
Doorboys and helpers, -----	1											1	2
Company men, -----	1	1				1			1				4
Totals, -----	7	5	3	2	1	5	1	5	2	3	1	1	36
Outside													
All other employes, -----	1	2			1						1		5
Totals, -----	1	2			1						1		5
Grand totals inside and outside, --	8	7	3	2	2	5	1	5	2	3	2	1	41

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Miners, -----	7	2	4	1	3	3		2	1		3	2	28
Miners' laborers, -----	3	3	3	1	5	1	1	1	1			3	20
Drivers and runners, -----	2					1			1	3	2	3	14
Doorboys and helpers, -----											1		1
Pumpmen, -----				1									1
Company men, -----	2	1	1		1	1			1	2	1		10
All other employes, -----												1	1
Totals, -----	14	6	8	3	9	5	1	5	4	5	7	8	75
Outside													
Blacksmiths and carpenters, -----			1										1
Engineers and firemen, -----				1					1				2
Slatepickers (boys), -----					2	2	1	1		1	1	1	3
All other employes, -----			1	3	2	2	1	1		1			11
Totals, -----			2	4	2	2	1	1	1	2	1	1	17
Grand totals inside and outside, --	14	6	10	7	11	7	2	6	5	7	8	9	92

TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
American, -----	1	2				1	1				2	1	8
Irish, -----		1	2			2		1	1				7
Polish, -----	5		1						1	2			10
Italian, -----		2		2	1	2							7
Lithuanian, -----								1		1			2
Austrian, -----	2	1						1					4
Russian, -----		1			1			1					3
Totals, -----	8	7	3	2	2	5	1	5	2	3	2	1	41

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
American, -----	2		1	3	2	2		2	3	5	4	3	27
English, -----	1		1										2
Welsh, -----		1	1							1			3
Scotch, -----					1								1
Irish, -----	3			1			1				1	2	8
German, -----	1				1								2
Polish, -----	6	3	4	1	2	1		1	1		2	1	22
Hungarian, -----												1	1
Italian, -----	1	2			1	2		1	1				8
Slavonian, -----					3		1					1	5
Lithuanian, -----				1		1				1			3
Austrian, -----					1						1		2
Russian, -----			3		1			2				1	7
Swedish, -----				1									1
Totals, -----	14	6	10	7	11	7	2	6	5	7	8	9	92

TABLE I.—Operators and mines, kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents, and number of persons employed inside

Names of Operators and Mines	Kind of opening	Gaseous or non-gaseous	Method of ventilation	Diameter of fan in feet	Width of blades in feet	Depth of blades in feet	Number of revolutions per minute	Water gauge developed—in inches	Name of fan	Power used	Number of splits of air currents	Number of cubic feet of air per minute entering the mine at inlet	Total quantity of air per minute circulating in all the splits in cubic feet	Number of cubic feet per minute passing out at outlet	Number of persons employed inside
Pennsylvania Coal Co.															
Number 6 Colliery:															
Number 5, -----	Shaft, -----	Gaseous, -----	Fan, -----	20	6.6	5.3	58	1	Guibal, --	Steam, ---	9	124,600	85,100	130,200	260
Number 6, -----	Shaft, -----	Gaseous, -----	Fan, -----	20	6.6	5.3	68	1	Guibal, --	Steam, ---	5	67,340	58,970	84,200	237
Number 11, -----	Shaft, -----	Gaseous, -----	Fan, -----	20	6	5	62	1.2			9	79,800	66,000	84,500	143
Number 9 Colliery:															
Number 1, -----	Shaft, -----	Gaseous, -----	Fan, -----	20	6.6	5.3	50	.9	Guibal, --	Steam, ---	4	92,950	78,785	101,100	131
Number 8, -----	Shaft, -----	Gaseous, -----	Fan, -----	20	6.6	5.3	50	.8	Guibal, --	Steam, ---	5	108,330	86,000	102,200	111
Number 9, -----	Shaft, -----	Gaseous, -----	Fan, -----	20	6	5	64	1.1			5	88,060	77,500	101,485	240
Number 10, -----	Shaft, -----	Gaseous, -----	Fan, -----	20	6	5	63	2			5	92,400	74,500	111,900	275
Ewen Colliery:															
Number 4, -----	Shaft, -----	Gaseous, -----	Fan, -----	20	6.6	5.3	63	1.5	Guibal, --	Steam, ---	7	100,210	92,125	108,845	330
Number 7, -----	Shaft, -----	Gaseous, -----	Fan, -----	20	6.6	5.3	60	1.1	Guibal, --	Steam, ---	5	85,951	72,751	91,257	229
Hoyt, -----	Shaft, -----	Gaseous, -----	Fans, -----	20	6	5	78	1.2			8	131,700	120,700	154,700	262
Number 14 Colliery:															
Number 14, -----	Shaft, -----	Gaseous, -----	Fans, -----	20	6	5	70	1.8	Guibal, --	Steam, ---	12	222,200	199,000	228,300	506
Number 14, -----	Tunnel, -----	Gaseous, -----	Fan, -----	17	5	4	64	.8	Guibal, --	Steam, ---	6	117,500	111,670	129,060	200
Courtright, -----	Slope, -----	Non-gas, -----	Fan, -----	20	6	5	40	.5			3	49,750	42,750	55,800	118

TABLE I—Continued

Names of Operators and Mines	Kind of opening	Gasous or non-gasous	Method of ventilation	Diameter of fan in feet	Width of blades in feet	Depth of blades in feet	Number of revolutions per minute	Water gauge developed—in inches	Name of fan	Power used	Number of splits of air currents	Number of cubic feet of air per minute entering the mine at inlet	Total quantity of air per minute circulating in all the splits in cubic feet	Number of cubic feet per minute passing out at outlet	Number of persons employed inside
Traders' Coal Co. Ridgewood Colliery:	Slope, ----- Tunnel, -----	Non-gas, ----- Non-gas, -----	Fan, ----- Natural, -----	16	5.2	4	85	.9	Guibal, --	Steam, ----	7	94,310 10,000	90,620 6,500	108,500 11,100	256 12
Ridgewood, ----- Ridgewood, -----															
Reliance Coal Co. Reliance Colliery:	Shaft, -----	Non-gas, -----	Fan, -----	18	4	5	60	.3	Guibal, --	Steam, ----	1	28,500	22,180	29,536	46

TABLE 1.—Operators, location of collieries, railroads, etc.

Names of Operators and Collieries	County	Name of General Superintendent	Post Office	Name of Superintendent	Post Office	Railroad to Mine
Pennsylvania Coal Co. Number 6, ----- Number 9, ----- Ewen, ----- Number 14, ----- Barnum, ----- Ewen Washery, ----- Number 9 Washery, -----	Luzerne, -----	{ W. A. May, Gen- eral Manager. W. W. Ingalls, -----	Dunmore, -----	{ H. T. McMillan, ----- Wm. P. Jennings, H. T. McMillan, ----- John W. Reid, ----- Wm. P. Jennings, H. T. McMillan, ----- { Wm. P. Jennings,	Pittston, -----	Erie
Lehigh Valley Coal Co. Mineral Spring, ----- Heidelberg No. 1, -----	Luzerne, -----	S. D. Warriner, General Manager.	Wilkes-Barre, -----	{ Thomas Thomas, ----- { W. D. Owens, -----	Dorrancton, ----- Pittston, -----	Lehigh Valley
Hillside Coal and Iron Co. Butler, ----- Clarence, ----- Susquehanna Washery, -----	Luzerne, -----	W. A. May, Gen- eral Manager.	Dunmore, -----	V. L. Peterson, -----	Scranton, -----	Erie { C. R. R. of N. J. { N. Y. S. and W.
Hudson Coal Co. Pine Ridge, ----- Lalish, -----	Luzerne, -----	C. C. Rose, Gen- eral Manager.	Scranton, -----	E. R. Petzebone, -----	Dorrancton, -----	Delaware and Hudson
Delaware and Hudson Co. Delaware, -----	Luzerne, -----	C. C. Rose, Gen- eral Manager.	Scranton, -----	E. R. Petzebone, -----	Dorrancton, -----	Delaware and Hudson
Traders Coal Co. Ridgewood, -----	Luzerne, -----	W. L. Slager, Gen- eral Manager.	Scranton, -----	Theodore Hogan, -----	Pittston, -----	N. Y. S. and W.
Reliance Coal Co. Reliance, -----	Luzerne, -----	M. J. Healey, -----	Plains, -----	A. J. Dufley, -----	Plains, -----	Lehigh Valley

TABLE 2.—Number of tons of coal mined, number of days worked, number of persons employed, number killed and injured, quantity of powder and dynamite used, etc.

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold by employees	Total production of coal in tons	Number of days worked	Number of employees	Number of fatal accidents	Number of non-fatal accidents	Number of kegs of powder used	Number of pounds of dynamite used	Number of horses and mules
Pennsylvania Coal Co.												
Number 6, -----		880,704	21,600	7,450	409,763	236	1,048	7	16	90,921	29,644	112
Number 9, -----		445,035	42,319	5,147	492,501	182	1,360	3	5	18,762	9,589	122
Ewen, -----	Luzerne,	455,085	89,427	1,970	491,512	238	1,245	3	7	19,171	21,889	93
Number 14, -----		579,839	95,635	2,328	697,453	217	1,482	10	21	22,902	37,891	188
Barnum, -----		881,231	12,308		893,539	240	784	4	6	16,314	4,017	83
		2,241,894	111,289	16,913	2,400,096	-----	5,919	27	55	98,070	102,920	508
Washeries												
Ewen, -----	Luzerne,	104,454	3,323		107,777	246	24					
Number 9, -----		69,653	2,446		72,129	204	47					
		174,137	5,769		179,906	-----	71					
Totals, -----		2,416,031	147,058	16,913	2,580,002	-----	5,990	27	55	98,070	102,920	508
Lehigh Valley Coal Co.												
Mineral Spring, -----	Luzerne,	230,636	40,643	3,180	274,459	186	510	2	5	7,098	81,745	83
Heidelberg No. 1, -----		203,730	28,013	1,569	233,312	195	450			6,969	27,020	83
		434,366	68,656	4,749	507,771	-----	960	2	7	14,067	108,765	166

TABLE 2. --Part 2

Names of Operators	County	Number of Boilers				Locomotives			Number of steam engines of all classes	Total horse power	Number of pumps delivering water to surface	Capacity in Gallons per minute	Quantity delivered to surface per minute—gallons	Number of electric dynamos	Number of air compressors	
		Cylindrical	Horse power	Tubular	Horse power	Total horse power	Steam	Alr								Electric
Pennsylvania Coal Co.,		6	132	82	14,562	14,724	14	11	20	184	8,901	17	21,948	10,640	4	20
Lehigh Valley Coal Co.,				22	3,250	3,250	3			49	3,792	12	7,812	6,352		
Hillside Coal and Iron Co.,				22	3,150	3,150	7		14	45	3,125	3	1,100	700	5	
Hudson Coal Co.,				23	4,465	4,465	1		2	110	5,148	7	9,200	4,300	1	5
Delaware and Hudson Co.,	Luzerne,	15	405	5	625	1,030				47	2,076	3	5,200	1,900	2	
Traders Coal Co.,		8	160	1	125	1,285				10	275	2	600	400		
Reliance Coal Co.,				4	450	450				3	430	2	480	240		1
Totals,		29	697	159	26,657	27,354	25	11	36	448	23,747	46	46,340	24,532	10	28

Table 3.—Continued

Names of Operators and Collieries	County	Inside										Outside							Grand total inside and outside			
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Doorboys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Foremen	Blacksmiths and carpenters	Engineers and firemen	State pickers (boys)	State pickers (men)		Bookkeepers and clerks	All other employes	Total outside
Hillside Coal and Iron Co.	Luzerne, -----	3	1	1	303	180	57	9	10	7	131	702	1	2	16	28	70	15	5	112	249	951
Butler, ----- Clarence, -----														1	1	4					33	39	39
Susquehanna Washery, -----	Luzerne, -----													3	17	32	70	15	5	145	288	990
Totals, -----		3	1	1	303	180	57	9	10	7	131	702	1	3	17	32	70	15	5	145	288	990
Hudson Coal Co.	Luzerne, -----	1	3	6	281	287	78	10	8	95	9	778	1	1	10	38	44	63	3	106	265	1,043
Pine Ridge, ----- Lafin, -----														1	7	18	16	16	2	50	110	535
Totals, -----		2	4	9	467	428	141	14	10	117	11	1,203	2	2	17	56	60	79	5	156	375	1,578
Delaware and Hudson Co.	Luzerne, -----	1	1	3	56	103	31	10	3	27	2	237	1	1	5	21	15	8	2	38	90	327
Delaware, -----																						
Traders Coal Co.	Luzerne, -----	1	3	1	105	53	40	8	2	22	6	241	1	1	4	10	13	9	2	25	65	306
Ridgewood, -----																						
Reliance Coal Co.	Luzerne, -----	1			25	25	8		2	6		67	1	1	2	6	20			12	43	110
Grand totals, -----		29	45	28	2,769	2,372	1,029	170	63	743	475	7,723	3	17	177	280	523	247	40	1,251	2,538	10,261

TABLE 3.—Part 2

Number of Days Worked in Breaker

Names of Operators and Collieries	County	Number of Days Worked in Breaker												Total				
		January	February	March	April	May	June	July	August	September	October	November	December					
Pennsylvania Coal Co.		21	19	21	21	21	22	16	17	18	18	17	18	18	20	21	19	236
Number 6,	Luzerne,	13	13	14	14	16	18	14	14	14	14	14	14	14	18	18	16	182
Number 9,		21	19	21	21	21	22	16	18	19	19	22	20	20	20	18	18	238
Ewen,		19	17	18	18	18	22	13	17	17	17	17	17	17	21	18	19	217
Number 14,		23	18	20	21	21	24	16	18	17	17	22	21	21	21	19	19	240
Barnum,																		
Lehigh Valley Coal Co.		23	20	10	18	19	19	10	11	14	14	11	14	14	15	15	13	186
Mineral Spring,	Luzerne,	23	15	9	22	23	24	11	13	18	18	3	16	16	16	16	16	195
Heidelberg No. 1,																		
Hudson Coal Co.		23	19	22	19	22	25	18	21	7	25	23	19	243				75
Batler,	Luzerne,	20	19	19	17													
Clarence,																		
Hillside Coal and Iron Co.		22	22	21	21	20	18	18	17	19	19	18	17	19	20	19	20	237
Pine Ridge,	Luzerne,	17	17	16	15	14	14	13	5									141
Lafin,																		
Delaware and Hudson Co.		13	12	12	12	12	12	11	12	12	12	11	12	12	14	14	13	149
Delaware,	Luzerne,																	
Traders Coal Co.		23	25	24	23	24	23	25	21	11	18	22	20	20	18	22	20	259
Ridgewood,	Luzerne,																	
Reliance Coal Co.																		
Reliance,	Luzerne,																	
									10	25	26	24	25	110				

TABLE 4.—Fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Mine	County	Nature and Cause of Accident in Brief
Jan. 2	John Connor, -----	American, ---	Driver, -----	16	S.	-----	-----	No. 6 shaft, -----	-----	Fatally injured by cars. Died same day. He was driving a trip of four cars on the gangway and to get over to the other side he jumped between the first and second cars. His foot slipped off the car bumper and he fell on the rails.
3	Stanley Yardage, -----	Polish, ----	Laborer, -----	24	S.	-----	-----	No. 14 tunnel, -----	-----	Fatally injured by fall of rock. He died after being placed in the ambulance at the colliery. His miner told him not to go under the rock, as it was unsafe, but yardage disobeyed his instructions and the rock fell on him.
3	Frank Popielass, -----	Polish, -----	Bankman, --	40	M.	1	2	Barrum, -----	Luzerne, -----	Suffocated by refuse of the burning culm bank on which he was working. Two men were employed, one in the morning and one in the afternoon, to examine a chute on the bank that conveyed the refuse from the breaker to the culm bank, and were instructed not to stay on the bank longer than necessary. About 4.00 P. M. Popielass was seen by one of the men and was apparently all right, but falling to come home after the breaker stopped work for the day, his brother went in search of him and found his body on the bank about 12.00 P. M. Outside.

Jan. 11	Joseph Patirco,	Polish,	Miner,	35	M.	1	2	Pine Ridge shaft,	Instantly killed. In forcing a cartridge of powder into a drill hole he broke the cartridge. He then scraped the powder out in a pile, when a spark from the lamp on his head fell into the loose powder and exploded it. His laborer was cut on the arm at the same time.
18	John Blaseake,	Austrian,	Doorboy,	16	S.	-----	-----	Butler M. slope,	Fatally injured by trip of cars on inside slope, Red Ash vein. Died January 20. He got on a trip of cars coming up the slope, and in jumping off his glove caught on the key of the door rod and he was thrown against the trip of cars. He had been told to keep away from the cars.
18	Frank Leshney,	Polish,	Miner,	54	M.	1	-----	Barnum No. 2 shaft.	Fatally injured by fall of rock. Died January 22. He and his partner tried to pull the rock down and failed. Leshney then went under the rock to blast more coal in order to free the rock a little more and while drilling a hole the rock fell on him.
28	Vasel Myscow,	Austrian,	Laborer,	21	S.	-----	-----	No. 14 shaft,	Fatally injured by fall of rock at face of breast. Died the same day. The miner had fired a blast and was preparing to fire another one when a large piece of rock fell and caught Myscow, who was shoveling coal back from the face.
31	John Chipka,	Polish,	Com. laborer,	38	M.	1	3	No. 14 shaft,	Fatally burned by gas. Died February 7. While he was attending to the flushing of cutin in the abandoned workings of the Pittston vein, Mark Walsh, a company man, went into an abandoned place close by with an open light and ignited gas that had accumulated. Instantly killed by fall of coal and rock at face of breast, Pittston vein. He was driving a cross entrance through the pillar and fired a blast, which failed to cut. He then tried to bar out the loose coal with his drill when the rider fatally and rock overhead fell on him.
Feb. 6	John McHugh,	Irish,	Miner,	50	M.	1	-----	Hoyte shaft,	Fatally injured by mine cars. While riding on the front end of a trip of mine cars coming from the breaker he fell off the car and the wheel passed over his foot. He was taken to the Pittston Hospital, where he died from lockjaw, February 14. Outside.
7	Frank Morris,	American,	Brakeman,	18	S.	-----	-----	Ewen,	

Luzerne,

TABLE 4.—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Mine	County	Nature and Cause of Accident in Brief
Feb. 18	Peter Giska, -----	Austrian, --	Miner, -----	42	S. -----	-----	-----	Butler M. slope, --	-----	Instantly killed by flying coal from a blast. He thought he had retired to a safe distance.
19	Thomas Powell, -----	American, --	Timberman, --	47	M. 1	3	3	Mineral Spring shaft.	-----	Killed by fall of rock. In the morning when the fire-boss made his rounds he discovered that the roof in this place was dangerous and ordered Powell and several other men to take the rock down or secure it with timber and while Powell was cutting a hitch in the rib to stand a set of timbers the rock fell, killing Powell and injuring three of the other men.
20	Baucolati Anechett, --	Italian, ---	Miner, -----	40	M. 1	-----	-----	Pine Ridge shaft,	Luzerne, -----	Instantly killed by premature explosion of powder while tamping a hole in the face of his breast.
24	Samuel Lanardi, -----	Italian, ----	Miner, -----	37	M. 1	7	7	No. 14 shaft, ----	-----	Fatally injured by an explosion of gas. Died March 3. In the morning the fire-boss found gas in Lanardi's place, caused by a fall of roof that broke down the brattice, and told him to keep out until the brattice had been put up and the gas removed. Lanardi went to the foot of his breast on the gangway and hearing a fall up in his breast went to investigate and the open light on his head ignited the gas.

Feb. 27	Matt Derwith, -----	Russian, ---	Bankman, ---	33	M. 1	3	No. 14, -----	Instantly killed. The culm and refuse from the breaker are taken up on the bank by a line of conveyors, and some distance from the head down the conveyor line is situated the machinery that operates the conveyors. Derwith went down from the head and crawled under the building where the belt entered and was caught between belt and stress pulley. Outside.
Mar. 6	John McTigue, -----	Irish, -----	Miner, -----	62	M. 1	-----	No. 5 shaft, -----	Instantly killed by fall of coal and rock. He fired a blast and then returned to the face of breast to see the result, when the coal and rock fell on him.
24	Peter Gellek, -----	Polish, ---	Laboret, -----	27	S. -----	-----	No. 6 shaft, -----	Fatally burned by gas. Died next day. He was told by the fire-boss in the morning not to go into his breast as there was gas in it, but he went up to the face and ignited the gas with his open light.
27	James McAndrew, -----	Irish, -----	Miner, -----	40	M. 1	4	No. 9 shaft, -----	Fatally injured by fall of top coal and rock. Died next day. He was barring out some loose coal after firing a blast, when the coal fell.
April 10	Leonard Deporte, -----	Italian, ---	Laborer, -----	33	M. 1	4	No. 7 shaft, -----	Fatally injured by fall of rock. Died same day. He was loading a car with coal and standing close to the rib, when a large piece of rock fell and struck him on the head, fracturing his skull.
29	Angelo Olerri, -----	Italian, ---	Miner, -----	25	S. -----	-----	Pine Ridge shaft, -----	Fatally burned by powder. Died May 4. While forcing a cartridge in the mouth of drill hole it broke, and the powder was ignited from his lamp and set fire to his clothing.
May 2	Orato Bohemia, -----	Italian, ---	Miner, -----	46	S. -----	-----	Coal Brook, -----	Fatally injured by mine cars. Died the same evening. He had only worked for the day and was waiting in the blacksmith shop for the locomotive to come from the tunnel with a trip of cars to the breaker. On the rear end of the loaded trip an empty car is attached for the use of the workmen. The locomotive engineer stopped the trip on the branch for the workmen to get into the car and Bohemia seeing the trip pass ran from the ston and attempted to get on the loaded cars while in motion. He missed his footing and fell under the cars. Outside.

Luzerne, -----

TABLE 4.—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Mine	County	Nature and Cause of Accident in Brief
May 14	Stanley Lakitus, -----	Russian,-----	Miner,-----	25	S.	-----	-----	No. 11 shaft,-----	-----	Fatally burned by premature blast. Died May 26. He fired a blast and the shot went off before he reached a place of safety and he was struck by the flying coal. He evidently had cut the match.
June 2	Michael Coreoran, ----	Irish,-----	Laborer,-----	32	M.	1	-----	Barnum No. 2 shaft.	-----	Fatally injured by fall of rock. Died the same day. While loading a car of coal at face of breast in the Pittston vein a large piece of top rock fell on him. Instantly killed by motor. He went out of the tunnel to the surface and when he was returning to work in the tunnel the motor came in with an empty trip of cars and he was somewhat blinded by the daylight and stepped from the loaded track in front of the motor.
11	William Ruane,-----	American,--	Shaft head- man,	24	M.	1	2	No. 1 shaft,-----	-----	Instantly killed by fall of rock in the Pittston vein. The miner had fired a blast in the top coal and was barring down the loose coal and rock when the laborer came up. He was ordered back by the miner, but he did not go in time and was caught by the falling rock. Instantly killed by a blast he was firing.
12	Charles Soudan,-----	Italian,-----	Laborer,-----	30	M.	1	1	No. 14 shaft,-----	Luzerne,-----	After lighting the match he stooped to pick up some tools, when the shot exploded.
16	Vincent Farriara,-----	Italian,-----	Miner,-----	30	M.	1	2	Butler slope,-----	-----	Fatally injured by a premature blast. Died same day. While firing a blast in his breast he cut the match too short and was struck by the flying coal before he could reach a place of safety.
17	John Cannon,-----	Irish,-----	Miner,-----	47	M.	1	2	Laurel Run slope,--	-----	

July 15	James Wilson,	American,	Mine foreman.	47	M.	1	2	Thomas shaft,	-----	Fatally injured by fall of rock. Died August 10. He was taking measurements in company with his assistant. He stood on the heading road while the assistant went up into a cross-cut to see how much further it should be driven, and while Wilson was stooping over the rock fell and broke Wilson's back.
Aug. 5	Egnotz Khmmitz,	Austrian,	Miner,	31	M.	1	2	Butler slope,	-----	Instantly killed by fall of top rock. He fired a blast in his breast, which knocked out two props. Instead of examining the roof and resting the props he started to shovel the loose coal towards the road, when the rock fell on him.
10	George Bartz,	Polish,	Miner,	47	M.	1	1	Pine Ridge shaft,	-----	Instantly killed by fall of fire clay roof in the Millman vein. He fired a blast and returned to the face to see the result, when the rock fell on him.
12	John Thomasanis,	Lithuanian,	Laborer,	21	S.	-----	-----	No. 14 shaft,	-----	Instantly killed. He was walking up the breast road after his miner had fired a blast, when a piece of rock in the shape of a bell fell out of the roof and struck him.
										Instantly killed by a fall of top coal as they were walking along the gangway road to their work. The miner was driving a counter gangway through the pillars to the line and then drawing them back. The evening before the miner had fired a blast in the top coal, which failed to cut. The next morning as they were passing under it the coal fell on them.
Sept. 1	Peter Clark,	Irish,	Com. laborer,	39	M.	1	7	No. 14 shaft,	-----	Fatally injured. Died September 5. He and another man were taking apart a large column pipe, cutting the bolts with a hammer and cutter. Clark got his leg under the pipe and when the last bolt was cut the pipe fell on his legs.
1	Michael Seeula,	Polish,	Driver,	18	S.	-----	-----	No. 14 shaft,	-----	Fatally injured. Died the same night. He got on the mine car while driving it out of a dip and leaped too far over the side of the car and was caught and squeezed between car and rib.
Oct. 2	Peter Grama,	Polish,	Miner,	30	M.	1	-----	Butler slope,	-----	Instantly killed. He fired a blast, which knocked out a prop and when he returned to the face of the breast the rock fell on him.

TABLE 4.—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Mine	County	Nature and Cause of Accident in Brief
Oct. 5	Joseph Caseski, -----	Polish, -----	Miner, -----	40	M. 1	1	2	No. 5 shaft, -----		Fatally injured by fall of rock. Died the same day. He fired a blast and when he returned to the face he went under the rock to see the result before he examined the roof, and the rock fell on him.
8	Peter Tomalunis, -----	Lithuanian, -----	Miner, -----	40	M. 1	1	6	No. 14 shaft, -----		Fatally burned by gas. Died October 17. While drilling a hole in the face of his breast, Checker vein, he cut a strong gas feeder, which he ignited, burning himself on the face, arms and back.
Nov. 23	David Jenkins, -----	American, -----	Driver, -----	17	S. -----	-----	-----	No. 1 shaft, -----	Luzerne, -----	Instantly killed by fall of rock in Red Ash vein. The runner was running a car out of breast and missed one of his sprags and the car jumped the track, tipped over and knocked out a prop. Jenkins and another driver went up to examine the car, when the rock fell.
28	Thomas Hurtt, -----	American, -----	Driver, -----	17	S. -----	-----	-----	Lafin tunnel, -----		Fatally injured by mine car. Died the next day. While unloading his team from trip of loaded cars on the outside passing branch his leg was caught between the car bumpers and squeezed. Outside.
Dec. 16	Edward Jezorskie, -----	American, -----	Doorboy, -----	16	S. -----	-----	-----	Barnum No. 2 shaft.		Fatally injured by mine car. Died the same day. He was in the dark as there was no oil in his lamp and he left his door to go up to a miner's breast to get oil and was caught by a car that was being run down.

TABLE 5.—Non-fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Mine	County	Nature and Cause of Accident in Brief
Jan. 7	Lewis Pesalina, -----	German, -----	Miner, -----	27	M.	No. 9 shaft, -----		Ankle broken by coal while barring it down at face of breast.
10	Charles Cobby, -----	English, -----	Miner, -----	44	M.	Lalin shaft, -----		Hips bruised by fall of rock at face of breast.
10	Alexander Freblrt, --	Polish, -----	Miner, -----	33	M.	No. 4 shaft, -----		Shoulder joint dislocated in getting off the cage at landing.
11	Charles Sumej, -----	Polish, -----	Laborer, -----	25	S.	Pine Ridge shaft, -----		Arm cut by coal flying from a premature blast.
13	John Grisko, -----	Polish, -----	Miner, -----	33	M.	No. 14 shaft, -----		Face and hands burned by gas. The miner fired a blast which broke the brattice down.
13	Martin Grisko, -----	Polish, -----	Laborer, -----	24	S.			
18	Thomas Francis, -----	American, --	Miner, -----	35	M.	Mineral Spring, -----		Leg broken by coal falling on him at face of breast.
21	Alphonus Aguson, -----	Italian, -----	Driver, -----	22	S.	No. 5 shaft, -----	Luzerne,	Arm broken by falling under mine car.
22	Joseph Novilla, -----	Polish, -----	Miner, -----	37	M.	No. 14 shaft, -----		Big toe cut off by rock falling on it while barring it down.
23	Hugh J. Gallagher, --	American, --	Miner, -----	45	M.	Laurel Run slope, -----		Ribs broken by coal flying from a blast.
24	James McGinty, -----	Irish, -----	Driver, -----	18	S.	No. 11 shaft, -----		Face slightly burned by gas at face of gangway. He ignited a feeder.
30	James Pudis, -----	Polish, -----	Laborer, -----	48	M.	Heidelberg shaft, -----		Body bruised. Fell off the cage close to the bottom of shaft.
31	Mark Walsh, -----	Irish, -----	Company laborer, -----	36	M.	No. 14 shaft, -----		Burned about the face and hands by gas.
31	Patrick Ludden, -----	Irish, -----	Road cleaner, -----	54	M.			
Feb. 4	Samuel Capell, -----	Italian, -----	Laborer, -----	25	S.	No. 4 shaft, -----		Walsh went into an abandoned place with an open light and ignited the gas.
19	John Benavage, -----	Polish, -----	Miner, -----	29	S.	Mineral Spring, -----		Leg broken by fall of rider coal.
19	William Ljewellyn, -----	Welsh, -----	Timberman, -----	32	M.	Mineral Spring, -----		Back and abdomen bruised by fall of rock at face of gangway.
19	John Polaskie, -----	Polish, -----	Miner's laborer, --	19	S.	Mineral Spring, -----		Leg badly cut by the above fall of rock.
24	Esconda Baldone, -----	Italian, -----	Laborer, -----	26	S.	No. 14 shaft, -----		Head cut by the above fall of rock. Face and hands burned by gas.

TABLE 5.—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Mine	County	Nature and Cause of Accident in Brief
Feb. 24	Charles Kaltomnis, ---	Polish, ---	Miner, ---	34	S.	No. 14 shaft, ---		Hand painfully bruised. Caught between rope and pulley in breast.
Mar. 5	John Griscomb, ---	Russian, ---	Laborer, ---	22	S.	No. 11 shaft, ---		Finger cut off. Hand bruised by coal flying from a blast.
18	Asa Wolfe, ---	American, ---	Carpenter, ---	27	M.	Barnum, ---		Skull fractured. Struck by falling pulley blocks. Outside.
19	Owen Tippet, ---	Welsh, ---	Miner, ---	43	M.	Clarence slope, ---		Leg broken by fall of rock.
21	John Millan, ---	Polish, ---	Laborer, ---	22	M.	Barnum No. 3 shaft, ---		Arm broken by fall of rider coal.
23	Richard Carter, ---	English, ---	Bratticeman, ---	50	S.	Pine Ridge shaft, ---		Face cut and bruised by coal flying from a blast.
24	Frank Wonsewel, ---	Russian, ---	Miner, ---	38	M.	Pine Ridge shaft, ---		Face and hands burned by gas that they ignited at face of breast.
24	Alexander Koomeski, ---	Polish, ---	Laborer, ---	30	S.	No. 6 shaft, ---		Face and hands burned by gas.
24	Michael Kosan, ---	Polish, ---	Miner, ---	26	S.	No. 6 shaft, ---		Face and hands burned by gas at face of breast.
28	Martin Matasavage, ---	Russian, ---	Miner, ---	40	M.	No. 11 shaft, ---	Luzerne, ---	Face and hands burned by gas at face of breast.
30	Fel'ic Cosloskey, ---	Polish, ---	Company man, ---	36	M.	No. 14, ---		Toes crushed and back bruised. Struck by locomotive. Outside.
April 3	James Meloin, ---	American, ---	Runner, ---	18	S.	No. 6, ---		Hand crushed between car bumpers while blocking the cars. Outside.
3	Michael Kopochek, ---	Lithuanian, ---	Miner, ---	39	M.	No. 14, ---		Foot crushed by railroad car at breaker while passing in front of it on his way home. Outside.
12	Frank Smith, ---	American, ---	Engineer, ---	26	M.	Ridgewood, ---		Leg broken. Struck by falling trough. He kicked out the support. Outside.
13	Bartley Johnson, ---	Swedish, ---	Pumpman, ---	50	M.	Pine Ridge shaft, ---		Arm bruised. Caught in cross-head of pump.
14	Anthony Kelley, ---	Irish, ---	Miner, ---	24	S.	No. 14 shaft, ---		Small bone in ankle broken by fall of rider coal.
14	Louis Jook, ---	Polish, ---	Laborer, ---	24	S.	No. 14 tunnel, ---		Arm broken by coal flying from a blast that his miner was firing.

Apr.	25	Roy McDonald,	American,	Company man,	17	S.	Barnum,	Leg broken by mine car while repairing the latches. Outside.
May	1	Joseph Ferrito,	Italian,	Laborer,	36	M.	No. 10 shaft,	Back painfully bruised by fall of rock.
	1	Henry Shales,	American,	Company man,	18	S.	No. 14 breaker,	Leg amputated. Crushed by railroad car, while standing on track.
	2	Michael Morris,	Slavonian,	Miner,	38	M.	Delaware shaft,	Face and hands burned by gas after they returned from firing a blast in the gangway, Ross vein. The blast cut a feeder of gas.
	2	John Suzar,	Polish,	Laborer,	24	S.		
	2	Michael Vesuskey,	Polish,	Laborer,	21	S.		
	8	Robert Wilson,	Scotch,	Miner,	39	M.	No. 14 tunnel,	Face cut by coal from a blast he thought had missed fire.
	18	John Suedel,	German,	Laborer,	27	S.	No. 14 tunnel,	Leg broken by fall of rock.
	23	John Wonego,	Russian,	Laborer,	22	M.	No. 14 breaker,	Painfully squeezed between railroad cars under breaker chutes.
	23	John Pavlisky,	Slavonian,	Miner,	28	M.	Laurel Run slope,	Face and hands burned by powder. While tamping a hole the powder ignited.
	23	Michael Kosiek,	Slavonian,	Laborer,	20	S.		
	28	John Purcell,	American,	Trackman,	28	M.	No. 5 shaft,	Leg painfully bruised. Struck by empty car on slope.
June	6	John Pilsko,	Austrian,	Company laborer,	55	M.	Thomas shaft,	Leg broken. Struck by slope rope.
	8	Thomas Scott,	American,	Miner,	49	S.	No. 6 shaft,	Face and hands burned by gas.
	24	Samuel Pohum,	Italian,	Runner,	20	S.	Ewen breaker,	Hand crushed by mine car while blocking same.
	26	Michael Galeski,	Lithuanian,	Miner,	24	S.	No. 5 shaft,	Eyes blown out by a premature blast he was firing.
	27	Peter Rimargie,	Polish,	Driver,	16	S.	No. 1 shaft,	Leg broken by empty car on chain hoist.
	28	Henry Matthewson,	American,	Night watchman,	54	M.	Barnum breaker,	Ankle broken by falling down steps in breaker.
July	8	Christa Stella,	Italian,	Miner,	25	S.	No. 7 shaft,	Leg broken by fall of rock at face of breast.
	20	Stephen Barco,	Slavonian,	Laborer,	30	M.	No. 1 shaft,	Lead cut by flying coal from a blast his miner was firing.
Aug.	1	Timothy Timmerty,	Irish,	Laborer,	65	M.	No. 6,	Knee painfully bruised. Caught between car bumpers. Outside.
	2	Anthony Smith,	Russian,	Runner,	22	S.	No. 11 shaft,	Shoulder bruised by car while opening door.
	19	Patrick Ludden,	American,	Company laborer,	23	M.	Ewen breaker,	Knee cap fractured. Struck it against rolls while repairing them.
	20	Benjamin Wyoskie,	American,	Driver,	22	S.	Pine Ridge shaft,	Shoulder dislocated. Struck by car he was spragging.
	26	John Smarsh,	Russian,	Miner,	43	M.	Delaware shaft,	Face and hands burned by powder he was carrying in his hand.
Sept.	2	John Zarawsky,	Polish,	Miner,	35	M.	No. 14 shaft,	Head bruised by rock falling from the roof on him.
	2	Anthony Benjamin,	Italian,	Laborer,	39	S.	Coal Brook slope,	Leg broken by fall of riber coal.
	2	Stephen Mudras,	American,	Driver,	18	S.	Pine Ridge shaft,	Ribs broken by being caught between car and rib.
	10	Andrew Vitcak,	Polish,	Miner,	42	M.	Delaware shaft,	Back bruised by flying coal from a blast he was firing.

Luzerne, -----

TABLE 5. ---Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Mine	County	Nature and Cause of Accident in Brief
Sept. 11	Patrick Gordon, ---	American, ---	Company laborer, ---	24	S.	No. 1 shaft, ---		Leg broken by mine rails falling on him.
19	John Shandra, ---	Italian, ---	Laborer, ---	21	S.	No. 5 shaft, ---		Leg broken by coal falling on him.
30	Elmer Anderson, ---	American, ---	Engineer, ---	17	S.	Mineral Spring breaker, ---		Arm broken while putting belt on pulley in breaker.
Oct. 3	Frank Kerby, ---	American, ---	Motorman, ---	20	S.	Thomas shaft, ---		Leg broken. Caught between motor and car.
7	Michael Swish, ---	Lithuanian, ---	Driver, ---	17	S.	No. 14 shaft, ---		Leg broken. Struck by coal flying from a blast.
9	Thomas Williams, ---	Welsh, ---	Company laborer, ---	24	S.	Butler slope, ---		Leg broken by car that jumped off track on him.
10	David Shales, ---	American, ---	Brakeman, ---	18	S.	No. 14, outside, ---		Leg badly crushed. Fell under trip of mine cars while uncoupling them.
14	James Morris, ---	American, ---	Runner, ---	17	S.	No. 6 shaft, ---		Hand crushed by car wheel while blocking it.
26	Dominick Malia, ---	American, ---	Runner, ---	18	S.	No. 4 shaft, ---		Head injured by rock falling on him.
28	George Albert, ---	American, ---	Slatepicker, ---	17	S.	Pine Ridge breaker, ---		Leg broken by belt while attempting to kick it off the pulley.
Nov. 5	Patrick Gallagher, ---	Irish, ---	Company laborer, ---	30	M.	Courtright slope, ---	Luzerne, ---	Jaw broken. Struck by trip of cars on slope.
13	John Stasko, ---	Polish, ---	Miner, ---	43	M.	Delaware shaft, ---		Arm broken. Struck by handle of windlass.
14	Anthony Kronovitch, ---	Polish, ---	Miner, ---	38	M.	No. 3 Barnum shaft, ---		Leg broken by fall of rock.
14	James Ward, ---	American, ---	Doorboy, ---	16	S.	No. 2 Barnum shaft, ---		Leg broken. Struck by motor.
16	Harry Gibbons, ---	American, ---	Runner, ---	20	S.	No. 14 tunnel, ---		Body bruised. Struck his head against roof and fell under trip of cars.
18	Michael Feteen, ---	Austrian, ---	Slatepicker, ---	16	S.	Butler breaker, ---		Arm broken by falling while cleaning windows in breaker.
28	Thomas Cavanaugh, ---	American, ---	Miner, ---	40	M.	Reliance shaft, ---		Body bruised by coal flying from a blast he thought had missed fire.
28	Bernard Burke, ---	American, ---	Runner, ---	20	S.	Laurel Run slope, ---		Foot bruised between cars while riding down slope.

Dec. 3	Harry Watkins, -----	American,--	Runner, -----	22	S.	No. 14 shaft, -----	Tees out off by trip of cars on head of slope.
3	William Gloflitch, -----	Russian, ---	Laborer, -----	19	S.	No. 11 shaft, -----	Leg broken by fall of rock at face of breast.
4	Frances McGinty, -----	Irish, -----	Miner, -----	50	M.	No. 11 shaft, -----	Leg dislocated by fall of rock at face of breast.
5	Thomas Steed, -----	American,--	Driver, -----	17	S.	No. 11 shaft, -----	Ankle broken by ear striking the head block.
7	Michael Ryan, -----	Irish, -----	Rockman, -----	39	M.	Butler slope, -----	Leg broken by fall of rock after he had fired a blast.
8	Leo McNulty, -----	American,--	Slatepicker, -----	16	S.	Even breaker, -----	Seriously injured by falling in front of railroad cars.
18	Michael Yatscek, -----	Hungarian,--	Miner, -----	58	M.	Ridgewood slope, -----	Face and hands burned by powder he was handling.
19	August Mudra, -----	Slovakian,--	Laborer, -----	25	S.	Pine Ridge shaft, -----	Leg broken by fall of rock at face of breast.
31	Frank Rustie, -----	Polish, ----	Driver, -----	18	S.	Caffin shaft, -----	Leg crushed by ear. The mule kicked him and he fell in front of car.

Luzerne, -----

CONDITION OF COLLIERIES

PENNSYLVANIA COAL COMPANY

Number 6 Colliery.—Ventilation, drainage and general condition as to safety good.

Number 9 Colliery.—Ventilation, drainage and general condition as to safety good.

Ewen Colliery.—Ventilation, drainage and general condition as to safety good.

Number 14 Colliery.—Ventilation, drainage and general condition as to safety good.

Barnum Colliery.—Ventilation, drainage and general condition as to safety good.

LEHIGH VALLEY COAL COMPANY

Mineral Spring Colliery.—Ventilation, drainage and general condition as to safety good.

Heidelberg Colliery.—Ventilation, drainage and general condition as to safety good.

HILLSIDE COAL AND IRON COMPANY

Butler Colliery.—Ventilation, drainage and general condition as to safety good.

HUDSON COAL COMPANY

Pine Ridge Colliery.—Ventilation good, drainage fair; general condition as to safety good.

Latfin Colliery.—Ventilation, drainage and general condition as to safety good.

DELAWARE AND HUDSON COMPANY

Delaware Colliery.—Ventilation, drainage and general condition as to safety good.

TRADERS COAL COMPANY

Ridgewood Colliery.—Ventilation and drainage fair; general condition as to safety good.

RELIANCE COAL COMPANY

Reliance Colliery.—Ventilation and drainage fair; general condition as to safety good.

IMPROVEMENTS

HILLSIDE COAL AND IRON COMPANY

Butler Colliery.—A tram road two miles in length has been built, by which the coal from the Fernwood slope openings is now being transported to the Butler breaker and there prepared; these openings now being a part of the Butler colliery. This necessitated changing the track gauge in the mines from 28 to 36 inches, as well as the car equipment, and adding about two hundred additional mine cars. A 26 ton steam locomotive was provided for transporting the coal outside, and one $7\frac{1}{2}$ ton and one 10 ton Westinghouse electric motor were added to the inside equipment.

In the Thomas shaft two short rock tunnels were driven from the second to the third Red Ash vein.

In the Butler Marcy vein slope the No. 9 heading was driven up the basin tapping the old Pennsylvania Coal Company workings, and by the aid of two electric pumps the water standing there has been practically all pumped out.

Two General Electric $7\frac{1}{2}$ ton gathering locomotives were added during the year, one in Checker vein slope and one in Thomas shaft. A 4 x 10 foot electrically driven ventilating fan was installed in connection with the Checker vein workings.

A new 240 K. W. General Electric generator and McEwen automatic high speed engine added to the electric power plant, and a new and larger cold air blast outfit to the boiler plant.

HUDSON COAL COMPANY

Latlin Colliery.—No. 4 rock tunnel was driven through the fault from the Red Ash vein 100 feet to same vein.

No. 5 Plane was driven 1,450 feet to fault in the top split of the Red Ash vein.

Pine Ridge Colliery.—Electric plant was installed and put in operation to handle the coal from Laurel Run slope to Pine Ridge shaft underground.

MINE FOREMEN'S EXAMINATIONS

The annual examination of applicants for certificates of qualification as Mine Foremen and Assistant Mine Foremen was held in the Y. M. C. A. Rooms, Pittston, May 19 and 20.

The Board was composed of the following members: Hugh McDonald, Inspector, Pittston; James J. McCartney, Superintendent, Luzerne; David P. Williams, Pittston and Michael J. Healey, Avoca, Miners.

The following persons passed a successful examination and were recommended for certificates:

Mine Foremen

Robert Gallagher, Wiliam J. Weaver, Thomas Thomas, Michael J. Eagan, Joseph Cavanaugh, Thomas Griffin, Joseph A. Brady, Thomas J. McHugh, William M. Matthews, John A. Hines, Patrick Hines, Robert W. Taylor, Thomas J. McNevin, Frank Hopkins, John Kelly, Michael J. Grady, Pittston; Thomas Gorman, Thomas Clark, George Kearney, James Conlon, John Wynne, Thomas Keating, Inkerman; John G. Chester, John Woods, Charles T. Birbeck, Thomas Malia, Thomas Ridgley, Patrick Reap, Patrick J. McKone, Robert H. Bonney, Maurice M. Johnson, Avoca; William R. Simmens, Hughestown; Thomas M. Jenkins, Henry Coates, Laflin; Andrew J. O'Malley and Peter J. Murray, Lopez; David J. Edwards, Edwardsville; James Lindsay, Thomas C. McCormack, John P. Frail, William A. Hughes, John A. Garraban, Plains; John S. Lewis, Miners Mills; John F. Shovlin, Murray; Patrick Duffy, Parsons; Patrick L. O'Brien, John F. Martin, Port Griffith; Bruce Weir, Wyoming; Joseph Dixon and Edward L. Barrett, Hudson.

Assistant Mine Foremen

David Jenkins, Harry L. Meade, William Lewis Morgan, Martin Gilvary, Patrick L. Heneghan, Pittston; Edward J. McQueen, John A. Connor, William Cotter, Benjamin Ridgley, James J. Deeble, Isaac D. Aston, John Painter, Avoca; James Dixon, Thomas Padden, James E. Kinney, John N. Jones, Hudson; Edward Jenkins, Charles Hurtt, James A. Simoson, Laflin; Arthur E. Bumbee, Wyoming; Thomas J. Langan, David E. Walsh, John J. Barrett, Maltby; Richard Hopkins, Timothy J. Lalley, Sebastopol; William A. Griffiths, Parsons; John Davitt, Anthony A. Walsh, John Grady, Plains; Michael McDonough; Allan Robertson, William Clark, George Jopling, Michael Dougher, Thomas McNulty, Inkerman; John Callaghan, John Cawley, Forty Fort; Lewis McLaughlin, Miners Mills; William Thomas, Yatesville; George Thomas, Duryea; John J. Lavelle, Plainsville.

Seventh District

LUZERNE COUNTY.

Wilkes-Barre, Pa., February 29, 1909.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor to transmit herewith my annual report as Inspector of Mines of the Seventh Anthracite District for the year ending December 31, 1908.

The report contains the statistical information required by law, with a brief description of the fatal accidents and the condition of the mines.

Respectfully submitted,

THOMAS H. PRICE,
Inspector.

SUMMARY OF STATISTICS

Number of collieries,	16
Number of mines,	45
Number of mines in operation,	44
Number of tons of coal shipped to market,	4,403,453
Number of tons used at mines for steam and heat,	483,361
Number of tons sold to local trade and used by employes, ..	212,870
Number of tons produced,	5,099,684
Number of tons produced by electrical machines, .....	.....
Number of tons produced by compressed air machines, .....	.....
Number of persons employed inside of mines,	7,865
Number of persons employed outside,	2,783
Number of fatal accidents inside of mines,	51
Number of fatal accidents outside,	4
Number of non-fatal accidents inside of mines,	62
Number of non-fatal accidents outside,	15
Number of tons of coal produced per fatal accident inside, ..	99,994
Number of persons employed per fatal accident inside, ..	155
Number of persons employed per fatal accident outside, ..	696
Number of person employed per non-fatal accident inside, ..	127
Number of persons employed per non-fatal accident out- side,	186
Number of wives made widows,	30
Number of children orphaned,	67
Number of steam locomotives used outside,	29
Number of compressed air locomotives used inside,	10
Number of electric motors used inside,	8
Number of fans in use,	45
Number of gaseous mines in operation,	42
Number of non-gaseous mines in operation,	2

TABLE A

PRODUCTION OF COAL

Names of Operators	Tons
Lehigh and Wilkes-Barre Coal Company,	2,279,069
Lehigh Valley Coal Company,	1,488,076
Delaware and Hudson Company,	869,748
Red Ash Coal Company,	189,040
North American Coal Company,	181,500
Pittston Coal Mining Company,	63,074
Wilkes-Barre and Scranton Coal and Iron Company,	29,177
	<hr/>
Total,	<u>5,099,684</u>

Production by Counties

Luzerne,	<u>5,099,684</u>
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TABLE B.—Fatal and non-fatal accidents inside and outside of mines; number of tons of coal produced per accident; number of persons employed; number employed per accident

Names of Operators	Fatal Accidents			Non-fatal Accidents			Tons of coal produced per fatal accident inside	Tons of coal produced per non-fatal accident inside	Number of employees inside	Number of employees outside	Total number of employees	Number of employees inside per fatal accident	Number of employees outside per fatal accident	Number of employees inside per non-fatal accident	Number of employees outside per non-fatal accident
	Inside	Outside	Total	Inside	Outside	Total									
	17	3	17	34	6	40									
Lehigh and Wilkes-Barre Coal Co.,	26	1	29	16	4	20	134,063	67,031	3,801	986	4,787	294	---	112	164
Lehigh Valley Coal Co.,	7	1	8	8	3	11	57,233	93,005	2,394	782	3,176	92	261	150	195
Delaware and Hudson Co.,	---	---	---	2	1	3	121,250	108,718	1,095	552	1,647	156	552	137	184
Pittston Coal Mining Co.,	---	---	---	2	1	3	---	---	---	---	---	---	---	---	---
Wilkes-Barre and Scranton Coal and Iron Co.,	1	---	1	2	1	3	29,177	31,507	105	60	165	---	---	53	60
Miscellaneous companies,	---	---	---	---	---	---	---	14,588	120	60	180	120	---	60	60
Totals and averages for district,	51	4	55	62	15	77	99,994	82,253	7,865	2,783	10,648	155	696	127	186

TABLE C.—Classification of Fatal Accidents Inside and Outside of Mines

	Months												Percentages	
	January	February	March	April	May	June	July	August	September	October	November	December		Totals
Causes of Accidents Inside														
Falls of coal, -----		1		2					1			2	6	11.77
Falls of roof, -----	2				7		1	1	1			1	14	27.45
Mine cars, -----		1			3			6		2		1	13	25.49
Explosions of gas and dust, -----	1	2	1						1		1		6	11.77
Explosions of powder and dynamite, -----									1				1	1.96
Premature blasts, -----				1	1						1		3	5.88
Miscellaneous, -----		4			1	1	1				1		8	15.68
Totals, -----	3	8	1	3	12	1	2	7	4	2	5	3	51	100.00
Causes of Accidents Outside														
Machinery, -----									1				1	25.00
Miscellaneous, -----			1							1		1	3	75.00
Totals, -----			1						1	1		1	4	100.00
Grand totals inside and outside, -----	3	8	2	3	12	1	2	7	5	3	5	4	55	

TABLE D.—Classification of Non-fatal Accidents Inside and Outside of Mines

	Months												Percentages	
	January	February	March	April	May	June	July	August	September	October	November	December		Totals
Causes of Accidents Inside														
Falls of coal, -----	1	1		3	1		1	2				1	10	16.13
Falls of roof, -----	1	1	2	1	2			1		1			10	16.13
Mine cars, -----	2	1	1	1	3	3	2	2	2	2		3	24	38.71
Explosions of gas and dust, -----	1	1									2		4	6.45
Premature blasts, -----	2		1		1				1				5	8.06
Mules, -----	1	1											1	1.61
Miscellaneous, -----	1	1		1	2				1		1	1	8	12.91
Totals, -----	9	5	4	6	9	3	3	5	3	4	6	5	62	100.00
Causes of Accidents Outside														
Cars, -----				1			1		2			1	5	33.33
Machinery, -----									1				1	6.67
Miscellaneous, -----	1	1		1			3					3	9	60.00
Totals, -----	1	1		2			4		3			4	15	100.00
Grand totals inside and outside, -----	10	6	4	8	9	3	7	5	6	4	6	9	77	

TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
Inside													
Mine foremen, -----		1											1
Assistant mine foremen, -----		1											1
Miners, -----	2	2		3	4		1	2	2		3	3	22
Miners' laborers, -----		2	1		2						1		11
Drivers and runners, -----		1			1			1		2			5
Doorboys and helpers, -----		1			2		1						4
Company men, -----	1				3	1		1			1		7
Totals, -----	3	8	1	3	12	1	2	7	4	2	5	3	51
Outside													
All other employes, -----			1						1	1		1	4
Totals, -----			1						1	1		1	4
Grand totals inside and outside, -----	3	8	2	3	12	1	2	7	5	3	5	4	55

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
Inside													
Miners, -----	3	1	1	3	2		2	3	1	3	1	1	21
Miners' laborers, -----	1	2	2	2	2	1	2	1			4	2	17
Drivers and runners, -----	4		1		1	1							8
Doorboys and helpers, -----		1			1				2	1		1	6
Pumpmen, -----					1								1
Company men, -----	1			1	2	1	1	1			1		8
All other employes, -----		1											1
Totals, -----	9	5	4	6	9	3	3	5	3	4	6	5	62
Outside													
Engineers and firemen, -----	1												1
Slatepickers (boys), -----							4		1				1
All other employes, -----		1		2								4	13
Totals, -----	1	1		2			4		3			4	15
Grand totals inside and outside, -----	10	6	4	8	9	3	7	5	6	4	6	9	77

TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
American, -----		1			1	1		1			1	1	6
English, -----	1	2											3
Welsh, -----	1	1			1								3
Irish, -----			1	1	1			1			1	2	7
German, -----					1								1
Polish, -----		2	1		6		1	4	3	2	1	1	21
Italian, -----				1			1						2
Slavonian, -----					1				1	1			3
Lithuanian, -----	1	1						1	1				4
Austrian, -----					1								1
Russian, -----		1		1							2		4
Totals, -----	3	2	2	3	12	1	2	7	5	3	5	4	55

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
American, -----	1	1	1	1	1	1	3		1		1	4	15
English, -----	1	1											2
Welsh, -----		1						1		1		2	5
Irish, -----	3		1	1	3		1			1		1	11
German, -----											1		1
Polish, -----	1	2	1	1	2	1	3	4	1	3	2		21
Slavonian, -----	2	1		1	1		1						7
Lithuanian, -----	1		1	2	1		1	1	1				7
Austrian, -----						1					1		2
Russian, -----	1			2	1		2						6
Totals, -----	10	6	4	8	9	3	7	5	6	4	6	9	77

TABLE I.—Operators and mines, kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents, and number of persons employed inside

Names of Operators and Mines	Kind of opening	Gasous or non-gasous	Method of ventilation	Diameter of fan in feet	Width of blades in feet	Depth of blades in feet	Number of revolutions per minute	Water gauge developed—in inches	Name of fan	Power used	Area of furnace bars in square feet	Number of splits of air currents	Number of cubic feet of air per minute entering the mine at inlet	Total quantity of air per minute circulating in all the splits in cubic feet	Number of cubic feet per minute passing out at outlet	Number of persons employed inside
Lehigh and Wilkes-Barre Coal Co.	Shaft,-----	Gasous,	Fan,-----	35	11.6	8.9	42	.9	Guibal,	Steam,	-----	5	148,320	139,010	152,120	144
Hollenback No. 2 Colliery:	Shaft,-----	Gasous,	Fan,-----	24	7.11	6.0	61	.9	}Guibal,	}Steam,	}-----	}9	}222,645	}186,490	}231,240	}384
Hollenback No. 2,	Shaft,-----	Gasous,	Fan,-----	35	11.9	8.9	45	1.1								
Hollenback No. 2,	Shaft,-----	Gasous,	Fan,-----	35	11.9	8.9	45	1.1								
Hollenback No. 2,	Shaft,-----	Gasous,	Fan,-----	35	11.9	8.9	45	1.1								
South Wilkes-Barre No. 5 Colliery:	Shaft,-----	Gasous,	Fan,-----	35	11.9	8.9	45	1.6	Guibal,	Steam,	-----	16	308,000	261,000	362,000	412
South Wilkes-Barre No. 5,	Shaft,-----	Gasous,	Fan,-----	35	11.9	8.9	45	1.6	}Guibal,	}Steam,	}-----	}15	}189,970	}134,020	}209,355	}449
South Wilkes-Barre No. 5,	Shaft,-----	Gasous,	Fan,-----	35	11.9	8.9	45	1.8								
South Wilkes-Barre No. 5,	Shaft,-----	Gasous,	Fan,-----	35	11.9	8.9	45	1.8								
South Wilkes-Barre No. 5,	Shaft,-----	Gasous,	Fan,-----	35	11.9	8.9	45	1.8								
Stanton No. 7 Colliery:	Shaft,-----	Gasous,	Fan,-----	24	8.0	6.0	60	1.1	Guibal,	Steam,	-----	8	99,200	91,800	110,050	180
Stanton No. 7,	Shaft,-----	Gasous,	Fan,-----	35	11.9	8.9	44	1.5	}Guibal,	}Steam,	}-----	}16	}267,510	}245,400	}293,630	}663
Stanton No. 7,	Shaft,-----	Gasous,	Fan,-----	34.6	11.7	8.45	44	1.5								

*Emergency fans.

TABLE I.—Continued

Names of Operators and Mines	Kind of opening	Gaseous or non-gaseous	Method of ventilation	Diameter of fan in feet	Width of blades in feet	Depth of blades in feet	Number of revolutions per minute	Water gauge developed—in inches	Name of fan	Power used	Area of furnace bars in square feet	Number of splits of air currents	Number of cubic feet of air per minute entering the mine at inlet	Total quantity of air per minute circulating in all the splits in cubic feet	Number of cubic feet per minute passing out at outlet	Number of persons employed inside
Red Ash Coal Co.	Slope,-----	Non-gas.,-----	Fan,-----	15	5	3.9	78	1.6	} Vulcan,	Steam,-----	-----	4	39,000	34,000	63,000	211
Red Ash No. 1, Red Ash No. 2,	Slopes and tunnels,-----	Non-gas.,-----	Fan,-----	15	5	3.9	70	1.6		-----	-----	-----	4	58,310	33,820	62,520	140
Pittston Coal Mining Co. Hadleigh,	Shaft,-----	Gaseous,	Fan,-----	17	4.6	5.6	60	.4	Tamaqua	Steam,-----	-----	4	47,000	25,000	59,200	194
Wilkes-Barre and Scranton Coal and Iron Co. Hillman,	Shaft,-----	Gaseous,	Fan,-----	30	10	8	40	1.4	Tamaqua	Steam,-----	-----	2	58,130	58,030	59,930	120
Miners' Mills Coal Mining Co. Healey,*	Slope,-----	Gaseous,	Fan,-----	16	4.25	4	60	1	Guibal,	Steam,-----	-----	2	16,240	11,380	18,160	-----

*Idle.

TABLE 1.—Operators, location of collieries, railroads, etc.

Names of Operators and Collieries	County	Name of General Superintendent	Post Office	Name of Superintendent	Post Office	Railroad to Mine
Lehigh and Wilkes-Barre Coal Co.						
Hollenback No. 2, -----						
South Wilkes-Barre No. 5, -----						
Stanton No. 7, -----						
Sugar Notch No. 9, -----						
Maxwell No. 20, -----						
Empire Washery No. 4, -----						
Jersey Washery No. 8, -----						
Lehigh Valley Coal Co.						
Prospect, -----						
Dorrance, -----						
Franklin, -----						
Warrior, -----						
Prospect Washery, -----						
Henry Washery, -----						
Franklin Washery, -----						
Delaware and Hudson Co.						
Baltimore No. 5, -----						
Baltimore Tunnel, -----						
Conyngham, -----						
Baltimore Slope Washery, -----						
Baltimore Tunnel Washery, -----						
Conyngham Washery, -----						
Red Ash Coal Co.						
Red Ash Nos. 1 and 2, -----						
North American Coal Co.						
Sugar Notch Washery, -----						
Pittston Coal Mining Co.						
Hadleigh, -----						
Wilkes-Barre and Seranton Coal and Iron Co.						
Hillman, -----						
Lehigh and Wilkes-Barre Coal Co.	Luzerne, -----	C. F. Huber, -----	Wilkes-Barre, -----	{ W. H. Herring } (Outside) { Morgan R. Mor- } { gans (Inside) }	Wilkes-Barre, -----	C. R. R. of N. J.
Dorrance, -----	Luzerne, -----	S. D. Warriner, -----	Wilkes-Barre, -----	Thomas Thomas, -----	Dorrance, -----	Lehigh Valley
Baltimore Tunnel, -----	Luzerne, -----	C. C. Rose, -----	Seranton, -----	E. R. Pettebone, -----	Dorrance, -----	Delaware and Hudson
Baltimore Slope Washery, -----	Luzerne, -----	S. V. Tench, -----	Wilkes-Barre, -----	S. V. Tench, -----	Wilkes-Barre, -----	C. R. R. of N. J.
Baltimore Tunnel Washery, -----	Luzerne, -----	H. W. Saums, -----	Wilkes-Barre, -----	H. W. Saums, -----	Wilkes-Barre, -----	C. R. R. of N. J.
Conyngham Washery, -----	Luzerne, -----	J. J. O'Boyle, -----	Seranton, -----	C. M. O'Boyle, -----	Dorrance, -----	C. R. R. of N. J.
Red Ash Nos. 1 and 2, -----	Luzerne, -----	J. D. Caryl, -----	Wilkes-Barre, -----	J. D. Caryl, -----	Wilkes-Barre, -----	Lehigh Valley

TABLE 2.—Number of tons of coal mined, number of days worked, number of persons employed, number killed and injured, quantity of powder and dynamite used, etc.

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold by employees	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Number of kegs of powder used	Number of pounds of dynamite used	Number of horses and mules
Hollenbaek No. 2, South Wilkes-Barre No. 5, Stanton No. 7, Sugar Notch, No. 9, Maxwell No. 20.	Luzerne,	112,584 404,800 482,426 325,280 570,572	35,766 32,574 51,857 19,116 48,129	17,166 93,728 15,729 4,328 3,443	165,516 531,102 550,012 348,733 622,144	106 226 225 231 217	775 1,112 1,079 668 1,069	1 3 9 2 2	5 6 15 4 9	4,538 16,683 18,251 13,043 16,393	20,810 102,075 41,627 49,880 69,116	91 133 138 84 120
Washeries: Empire No. 4, Jersey No. 8.	Luzerne,	46,261 124,406	187,442 1,186	134,394 467 1,242	2,217,507 46,728 14,834	---	4,733 34 20	17 1 ---	39 ---	68,968 ---	283,508 ---	506 1 1
Totals,		1,951,338	188,628	136,103	2,279,069	---	4,787	17	40	68,968	283,508	568
Prospect, Dorrance, Franklin, Warrior Run.	Lehigh Valley Coal Co.	656,106 225,343 197,755 53,293	55,921 22,300 7,175 20,940	3,458 47,575 7,175 681	695,485 295,218 228,190 74,914	211 181 211 175	1,740 697 505 148	11 7 5 6	6 5 5 4	20,829 9,298 7,040 2,612	33,099 48,796 12,072 707	270 96 83 15
		1,112,497	122,421	58,889	1,293,807	---	3,060	29	20	39,770	94,674	464

TABLE 2.—Part 2

Names of Operators	County	Number of Boilers				Locomotives			Number of steam engines of all classes	Total horse power	Total horse power	Number of pumps delivering water to surface	Capacity in gallons per minute	Quantity delivered to surface per minute—gallons	Number of electric dynamos	Number of air compressors	
		Cylindrical	Horse power	Tubular	Horse power	Total horse power	Steam	Air									Electric
Lehigh and Wilkes-Barre Coal Co.,		3	90	56	11,357	11,447	7	9	266	22,174	12	19,444	8,175	13			
Lehigh Valley Coal Co.,		33	891	45	9,475	9,475	17	1	139	15,635	14	9,945	6,600	5	11		
Delaware and Hudson Co.,				25	5,225	6,116	2		129	8,742	10	7,500	3,850	3			
Red Ash Coal Co.,	Luzerne,			3	900	900	3		31	1,377	4	1,100	556				
North American Coal Co.,				2	500	500			10	255							
Pittston Coal Mining Co.,				2	600	600			16	600	1	700	600				
Wilkes-Barre and Scranton Coal and Iron Co.,				7	1,050	1,050			7	558	2	800	400				
Totals,		36	981	140	29,107	30,088	29	10	598	49,341	43	39,480	20,441	8	28		

Table 3.—Number of each class of employes inside and outside of mines

Names of Operators and Collieries	County	Inside										Outside										Grand total inside and outside
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Doorboys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Foremen	Blacksmiths and carpenters	Engineers and firemen	Slate pickers (boys)	Slate pickers (men)	Bookkeepers and clerks	All other employes	Total outside	
Lehigh and Wilkes-Barre Coal Co.		2	1	7	225	168	62	24	4	95	588			1	5	23	41	36	4	77	187	775
Hollenback No. 2,		1	2	11	320	240	90	53	3		170			1	10	31	69	8	5	84	220	1,112
South Wilkes-Barre No. 5,		2	1	10	346	195	90	59	5	74	76			1	8	39	65	22	5	81	221	1,079
Stanton No. 7,	Luzerne,	1	1	6	254	165	47	43	3		83			1	6	16	30	4	3	55	115	698
Sugar Notch No. 9,		1	2	9	366	240	63	63	4	63	69			1	6	31	43	13	4	91	189	1,069
Maxwell No. 20,		7	7	43	1,431	1,008	352	244	19	232	398	3,801		5	35	140	248	83	21	400	932	4,733
Washeries:														1	1	4			1	27	34	34
Empire No. 4,	Luzerne,													1	1	2			1	16	20	20
Jersey No. 8,														2	2	6			1	43	54	54
		7	7	43	1,431	1,008	352	244	19	232	398	3,801		7	37	146	248	83	22	443	986	4,787
Lehigh Valley Coal Co.		7	22	1	506	310	198	56	15		257	1,371		2	33	55	83	16	6	224	369	1,740
Prospect,		1	1	1	195	117	64	20	5		141	556		1	14	24	13		4	85	141	697
Dorrance,	Luzerne,	1	5	125	85	53	53	5	6		79	359		1	16	22	19	1	3	84	146	565
Franklin,		1	2	34	25	8	8	2	4		32	108		1	5	9			1	24	40	148
Warrior Run,		10	38	1	860	537	323	83	30		512	2,394		5	68	110	65	17	14	417	696	3,090

Table 3.—Continued

Names of Operators and Collieries	County	Inside										Outside							Grand total inside and outside					
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Doorbys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Foremen	Blacksmiths and carpenters	Engineers and firemen	State pickers (boys)	State pickers (men)		Bookkeepers and clerks	All other employes	Total outside		
Washeries: Prospect, Henry, Franklin,	Luzerne,	10	38	1	866	537	323	83	30	512	2,304	---	---	---	1	7	1	---	---	---	10	12	12	
Totals,													6	68	133	67	17	14	487	782	3,176	86	86	
Delaware and Hudson Co. Baltimore No. 5, Baltimore Tunnel, Conyngham,	Luzerne,	2	1	6	198	191	54	9	8	112	9	590	---	---	---	1	38	71	21	3	84	229	819	
Totals,													1	6	21	31	31	1	55	146	460	292	292	
Washeries: Baltimore Slope, Baltimore Tunnel, Conyngham,	Luzerne,	4	2	11	356	350	115	16	17	201	23	1,095	---	---	---	3	22	74	128	65	5	179	476	1,571
Totals,													1	1	4	5	8	1	20	35	35	35	35	
		4	2	11	356	350	115	16	17	201	23	1,095	---	---	---	4	24	78	140	78	6	222	552	1,617

Red Ash Coal Co. Red Ash Nos. 1 and 2, -----	1	2	114	119	45	4	4	61	350	1	6	10	20	23	36	2	203	301	651
North American Coal Co. Sugar Notch Washery, -----										1	1	2	4	7		2	25	42	42
Pittston Coal Mining Co. Hadleigh, -----	1		52	27	10	2	2	5	5	1	2	4	10	12	2	1	28	60	165
Wilkes-Barre and Scranton Coal and Iron Co. Hillman, -----	1		36	56	9		4	12	120	1	1	3	9	16	4	1	25	60	180
Grand totals, -----	24	49	58	2,909	2,097	854	349	76	511	938	7,865	148	300	513	220	48	1,433	2,783	10,648

TABLE 4.—Fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Mine	County	Nature and Cause of Accident in Brief
Jan. 4	Joseph Kaveleski, ---	Lithuanian, ---	Miner, ---	28	M. ---	1	6	Stanton No. 7, ---	Luzerne, ---	Instantly killed by fall of top rock at face of chamber.
6	Thomas S. Jones, ---	Welsh, ---	Miner, ---	47	M. ---	1	---	Hillman, ---	Luzerne, ---	Fatally injured, both legs crushed by fall of top rock at face of chamber.
13	Charles Secker, ---	English, ---	Bratticeman, ---	26	M. ---	1	3	Conyngnam, ---	Luzerne, ---	Fatally injured by an explosion of gas while removing it at face of chamber.
Feb. 10	Luke Nankwell, ---	English, ---	Mine foreman, ---	44	M. ---	1	1	Baltimore No. 5, ---	Luzerne, ---	Fatally burned by an explosion of gas while examining abandoned workings. Died February 13.
10	Charles Poad, ---	English, ---	Assistant foreman, ---	40	M. ---	1	3	Baltimore No. 5, ---	Luzerne, ---	Fatally burned by an explosion of gas while examining abandoned workings. Died February 27.
11	Barney Zabona, ---	Polish, ---	Miner, ---	26	S. ---	---	---	Hollenback, ---	Luzerne, ---	Fatally injured in some unknown manner while descending into the mine on the carriage with nine other men.
12	Thomas W. Thomas, ---	Welsh, ---	Miner, ---	57	M. ---	1	---	Baltimore Tunnel, ---	Luzerne, ---	Instantly killed by fall of top coal while barring loose coal after a blast at face of chamber.
12	Louis Goysttus, ---	Russian, ---	Doorman, ---	25	S. ---	---	---	Stanton No. 7, ---	Luzerne, ---	Fatally injured. Caught between car and door post while coupling cars in motion on gangway road.
21	Barney Quadder, ---	Lithuanian, ---	Laborer, ---	27	S. ---	---	---	Stanton No. 7, ---	Luzerne, ---	Quadder and Owens were instantly killed and Boyer fatally injured by a piece of ice on top of the carriage bonnet crushing it on top of the men. Boyer died the same day.
21	Evan Owens, ---	American, ---	Driver, ---	20	S. ---	---	---	Stanton No. 7, ---	Luzerne, ---	Fatally injured while unloading prop timber on railroad car. Outside.
21	Andro Boyer, ---	Polish, ---	Laborer, ---	26	S. ---	---	---	Stanton No. 7, ---	Luzerne, ---	Fatally burned by an explosion of gas while brushing out gas at face of chamber.
Mar. 14	Michael Smith, ---	Irish, ---	Company laborer, ---	44	M. ---	1	---	Baltimore No. 5, ---	Luzerne, ---	Fatally injured while unloading prop timber on railroad car. Outside.
31	Alex Nalepa, ---	Polish, ---	Laborer, ---	32	M. ---	1	3	Sugar Notch No. 9, ---	Luzerne, ---	Fatally burned by an explosion of gas while brushing out gas at face of chamber.

TABLE 4.--Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Mine	County	Nature and Cause of Accident in Brief
April 7	Mike Samenskie, ----	Russian, ----	Miner, ----	23	M. ----	1	2	Dorrance, ----	Luzerne, ----	Fatally injured by premature blast at face of chamber.
11	Luke Commer, ----	Irish, ----	Miner, ----	72	M. ----	1	---	Prospect, ----	---	Fatally injured, struck by piece of coal on side of back at face of chamber.
11	Mondene Sanlucci, ----	Italian, ----	Miner, ----	35	M. ----	1	3	Prospect, ----	---	Fatally injured by fall of coal at face of chamber.
May 4	Contsine Novoski, --	Polish, ----	Miner, ----	35	M. ----	1	2	Baltimore Tunnel, ----	---	Fatally injured by premature blast while pushing a charge of powder with iron scraper at face of chamber.
8	Anthony Brista, ----	Polish, ----	Laborer, ----	28	S. ----	---	---	Dorrance, ----	---	Instantly killed. Fell off carriage while descending into the mine.
13	Martin Deguan, ----	Irish, ----	Timberman, ----	38	M. ----	1	8	Prospect, ----	---	Instantly killed by fall of top rock on gangway road.
13	Andrew Wasko, ----	Slavonian, ----	Helper, ----	35	M. ----	1	2	Prospect, ----	---	---
13	Paul Bozent, ----	Polish, ----	Miner, ----	45	M. ----	1	3	Prospect, ----	Luzerne, ----	---
13	Peter Zwiniński, ----	Polish, ----	Driver, ----	19	S. ----	---	---	Prospect, ----	---	---
13	Michael Libzak, ----	Polish, ----	Doorboy, ----	17	S. ----	---	---	Prospect, ----	---	---
16	Richard Mularkey, --	American, ----	Doorboy, ----	17	S. ----	---	---	Franklin, ----	Luzerne, ----	---
16	Evan J. Owens, ----	Walsh, ----	Miner, ----	53	M. ----	1	---	Franklin, ----	---	---
23	Jacob Lenhart, ----	German, ----	Timberman, ----	44	M. ----	1	2	South Wilkes-Barre, ----	---	---
25	Peter Zukowskie, ----	Polish, ----	Miner, ----	30	S. ----	---	---	Dorrance, ----	---	---
30	Ignats Perza, ----	Austrian, ----	Laborer, ----	40	M. ----	1	3	Stanton No. 7, ----	---	---
June 22	John Moran, ----	American, ----	Shaftman, ----	33	M. ----	1	---	Dorrance, ----	---	---
July 15	Joseph Guiseppi, ----	Italian, ----	Miner, ----	28	S. ----	---	---	Franklin, ----	Luzerne, ----	---
28	Charles Reshimovitch, ----	Polish, ----	Laborer, ----	23	S. ----	---	---	Maxwell No. 20, ----	---	---

Aug. 18	Patrick Kearney,	Irish,	Timberman,	37	M.	1	1	Dorrance,	Instantly killed by fall of top rock at foot of slope while cleaning a cave.
28	James Gallagher,	American,	Runner,	24	S.	---	---	Warror Run,	
28	Adam Baseavage,	Lithuanian,	Doortender,	17	S.	---	---	Warror Run,	
28	Peter Ostrofsky,	Polish,	Miner,	46	M.	1	10	Warror Run,	The first five persons named were instantly killed and Frank Poprota was fatally injured. He died September 1.
28	John Tokarshak,	Polish,	Miner,	56	M.	1	---	Warror Run,	
28	Julius Muscavage,	Polish,	Laborer,	24	S.	---	---	Warror Run,	
28	Frank Poprota,	Polish,	Laborer,	20	S.	---	---	Warror Run,	
28	Philip Seroski,	Slavonian,	Table tender,	19	S.	---	---	Prospect,	Instantly killed. Fell into condemned coal elevator. Outside.
Sept. 4	Charles Ambrose-	Lithuanian,	Laborer,	22	S.	---	---	South Wilkes-Barre,	Fatally injured by fall of top rock at face of gangway.
15	Frank Hydek,	Polish,	Laborer,	26	S.	---	---	Conyngham,	Fatally injured by fall of top coal at face of chamber while assisting the miner to stand a prop.
17	Edward Viteoski,	Polish,	Miner,	31	M.	1	---	Sugar Notch No. 9,	Fatally burned by an explosion of gas at face of chamber.
19	Anthony Koziwicki,	Polish,	Miner,	22	S.	---	---	Prospect,	Fatally burned by an explosion of black powder while making a charge of powder.
Oct. 1	Barney Pasterki,	Polish,	Loader boss,	31	M.	1	---	Franklin,	Fatally injured. Struck on head by piece of timber that fell from top of breaker. Outside.
1	Michael Mazinko,	Slavonian,	Driver,	21	S.	---	---	Franklin,	Fatally injured. Caught between loaded car and timber on gangway road.
20	Martin Castin,	Polish,	Runner,	20	S.	---	---	Prospect,	Instantly killed by runaway car on gangway road while attempting to turn a switch.
Nov. 9	August Puvin,	Russian,	Miner,	30	M.	1	6	Stanton No. 7,	Fatally injured by fall of top rock at face of chamber.
10	Alex McGuire,	Irish,	Miner,	59	M.	1	3	Maxwell No. 20,	Fatally burned by explosion of gas at face of chamber.
10	Martin Ryan,	American,	Slope footman,	38	S.	---	---	Dorrance,	Fatally injured. Squeezed between car and shaft carriage at foot of shaft.
21	Paul Ekert,	Polish,	Miner,	38	M.	1	1	Stanton No. 7,	Fatally injured. While he was standing a prop it fell on him.
24	Frank Bulchoka,	Russian,	Laborer,	20	S.	---	---	Stanton No. 7,	Instantly killed by dying coal from a blast that broke through the pillar.
Dec. 2	John Connor,	American,	Locomotive helper,	21	S.	---	---	Dorrance,	Fatally injured by props that fell off a truck on top of him. Outside.
4	Alex Wizniewski,	Polish,	Miner,	34	M.	1	4	Prospect,	Fatally injured by fall of top rock at face of chamber.
4	John Boyle,	Irish,	Miner,	40	M.	1	---	South Wilkes-Barre,	Fatally injured by fall of top coal at face of chamber.
23	William P Hollins,	Irish,	Miner,	29	M.	1	1	Baltimore No. 5,	Fatally injured by fall of top coal at face of gangway.

Luzerne, -----

Luzerne, -----

TABLE 5.—Non-fatal accidents inside and outside of mines

Date of accident	Name of Person		Nationality	Occupation	Age	Married or single	Name of Mine	County	Nature and Cause of Accident in Brief
	First name	Last name							
Jan. 8	Anthony	McMananun,	Irish,	Fireman,	27	S.	Hadleigh,		Face and hands scalded by water plug bursting in boiler house. Outside. Leg broken. Struck by piece of top rock while replacing prop after blast. Hands and face seriously burned by explosion of gas. Head cut and back bruised by premature blast at face of chamber. Left arm broken and shoulder dislocated. Struck by mine rail that fell off mine car. Skull and right arm fractured. Fell under empty car at head of car hoist. Leg broken below knee. Struck by piece of coal that rolled against his leg at face of chamber. Fingers badly cut; hand was caught between sprag and bottom rock. Sight of right eye destroyed and left arm crushed. Kicked in face by mule and fell under car. Hands and face cut by premature blast at face of chamber. Face badly burned by explosion of gas. Compound fracture of left leg and head bruised by fall of middle rock at face of chamber. Leg broken by piece of coal that rolled down chute against his leg. I left arm broken and face bruised. Fell off chain hoist incline. Outside.
13	Michael	Benauski,	Lituanian,	Miner,	23	S.	Sugar Notch No. 9,		
13	John	Adams,	English,	Tracklayer,	32	M.	Conyngham,		
13	Andrew	Sarake,	Slavonian,	Miner,	46	M.	Baltimore No. 5,		
13	Thomas	Casey,	American,	Driver,	44	M.	Franklin,		
27	Charles	Lynch,	Slavonian,	Driver,	21	S.	Baltimore No. 5,		
27	Stanley	Sykoski,	Russian,	Laborer,	21	S.	Baltimore Tunnel,		
28	James E.	Reilly,	Irish,	Driver,	29	S.	Sugar Notch No. 9,	Luzerne,	
29	Thomas	McGrane,	Irish,	Driver,	18	S.	Sugar Notch No. 9,		
31	Ignas	Koslowski,	Polish,	Miner,	44	S.	Maxwel No. 20,		
Feb. 1	Martin	Lavin,	American,	Motorman,	31	S.	Baltimore Tunnel,		
6	Peter	Bonyuza,	Polish,	Laborer,	30	S.	Dorrance,		
8	Frank	Vetick,	Polish,	Laborer,	45	M.	Hillman,		
9	William	Stone,	English,	Ticket boss,	53	M.	Baltimore No. 5,		

Feb. 14	Phillip Jones,	Welsh,	Miner,	48	S.	Hollenback No. 2,	Two ribs fractured by fall of coal while barring loose coal after a blast at face of chamber.
26	Mike Pajlee,	Slavonian,	Patcher,	18	S.	Stanton No. 7,	Right leg fractured. Caught between cars while steaming a ride on locomotive trip.
Mar. 3	Frank Coolbaugh,	American,	Driver,	21	S.	Franklin,	Head cut and arm bruised. Fell under trip on gangway road.
6	Adam Venuchek,	Polish,	Laborer,	32	M.	Hadleigh,	Compound fracture of leg by fall of top rock while assisting the miner to bar it down.
9	Hugh O'Donnell,	Irish,	Miner,	47	M.	Hillman,	Back injured by fall of top rock while standing a prop to secure it at face of chamber.
11	Anthony Samitas,	Lithuanian,	Laborer,	24	S.	Stanton No. 7,	Arm fractured and body bruised by premature blast from an adjoining chamber through the heading.
April 8	Anthony Ambrose,	Lithuanian,	Laborer,	20	S.	South Wilkes-Barre,	Leg fractured below the knee by running against a car bumper at face of chamber after he had ignited the gas.
10	John Vayvoek,	Russian,	Miner,	44	M.	Prospect,	Left ankle fractured. Struck by piece of top coal while barring loose coal after a blast.
11	Patrick Cosgrove,	American,	Shaft footman,	31	S.	Dorrance,	Head bruised and ribs broken. Squeezed between car and prop.
11	Michael Semovage,	Russian,	Loader,	22	M.	Franklin,	Collar bone broken and ribs fractured. Fell off top of railroad car. Outside.
13	Owen Caffrey,	Irish,	Screen loader,	50	S.	Hollenback No. 2,	Two ribs fractured and body bruised. Struck by empty car on fuel stock bank. Outside.
18	Mike Geomethz,	Slavonian,	Miner,	56	M.	Prospect,	Scalp wounded and shoulder blade broken by fall of top rock at face of chamber.
23	James Ogriniba,	Polish,	Laborer,	29	M.	Stanton No. 7,	Leg fractured and head cut by piece of bony coal that fell on him while assisting the miner to stand a prop.
24	Simon Seuditch,	Lithuanian,	Miner,	34	S.	Hollenback No. 2,	Left leg fractured below the knee and head badly cut by fall of top coal at face of chamber.
May 4	Charles Yazville,	Russian,	Patcher,	17	S.	Maxwell No. 20,	Collar bone fractured by runaway car on slope.
8	John Shinskie,	Polish,	Laborer,	25	S.	Dorrance,	Leg broken by fall of fire clay and top coal at face of chamber.
9	Joseph Savage,	Polish,	Miner,	27	S.	Maxwell No. 20,	Left leg fractured above knee. Struck by piece of top rock at face of chamber.
13	Dominick Dunn,	Irish,	Footman,	41	M.	Hollenback No. 2,	Right arm fractured above wrist by lever.
14	Frederick Drugan,	Irish,	Company miner,	22	M.	Hollenback No. 2,	Big toe of left foot fractured by a lever that slipped and fell on it.
14	Anthony Semonavage,	Lithuanian,	Laborer,	24	S.	South Wilkes-Barre,	Leg fractured. Struck by piece of top rock that fell from between timbers on his leg at face of airway.

Luzerne,

TABLE 5. Continued

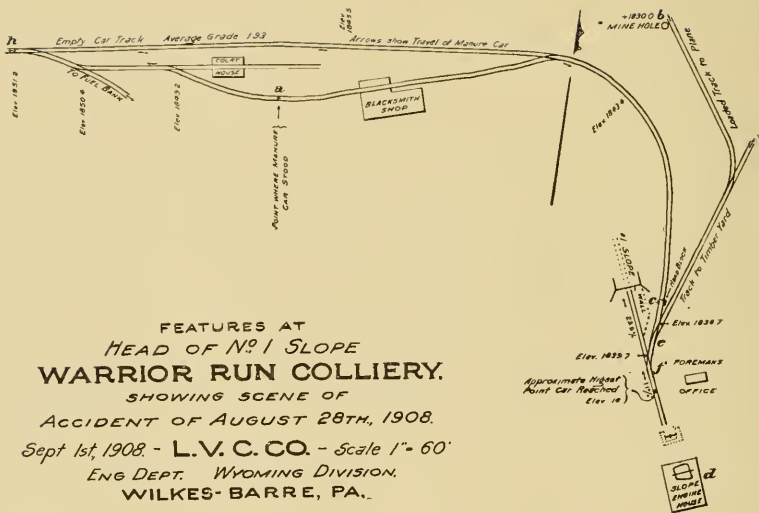
Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Mine	County	Nature and Cause of Accident in Brief
May 15	George Lalley, -----	Irish,-----	Driver,-----	33	S.	Dorrance,-----		Hip dislocated and leg cut. Fell off bumper of car and was dragged under it.
16	David Williams,-----	American,---	Pumpman,---	22	S.	Franklin,-----		Seriously injured by runaway trip on slope.
26	Mike Savol,-----	Slavonian,---	Miner,-----	45	M.	Prospect,-----		Two ribs broken and body bruised by premature blast at face of chamber.
June 4	Frank Baker,-----	American,---	Driver,-----	20	S.	Stanton No. 7,-----		Nose fractured and body bruised. Struck by loaded car coming down a chamber road.
23	Joseph Smith,-----	Austrian,---	Company laborer,--	25	S.	Dorrance,-----		Pevis injured. Caught between car and door frame.
24	Anthony Savage,-----	Polish,---	Laborer,-----	53	M.	South Wilkes-Barre,		Collar bone and ribs fractured. Struck by empty buggy at face of chamber.
July 8	George Woodring,---	American,---	Craneman,---	38	M.	Empire Washery,--		Index finger of right hand cut off. Caught between grinding-stone and frame.
8	Anthony Gida,-----	Russian,---	Miner,-----	38	M.	Stanton No. 7,-----	Luzerne,-----	Thumb crushed while attempting to uncouple cars that were in motion.
10	Dennis Bonner,-----	Irish,-----	Miner,-----	54	M.	Baltimore Tunnel,--		Right leg fractured above knee and left leg fractured at ankle by piece of coal that fell from side of chamber.
17	Simon Rosin,-----	Russian,---	Propman,-----	42	M.	Prospect,-----		Hip broken. Struck by loose rope while pulling it. Outside
17	George Macheusky,---	Slavonian,---	Shaft headman,---	45	M.	Prospect,-----		Face cut and nose broken. Struck by loose rope while pulling it. Outside.
21	John Brislin,-----	American,---	Plane tender,---	19	S.	Warrior Run,-----		Right leg broken and left leg bruised. Fell under car on plane. Outside.
29	Owen McHugh,-----	American,---	Slope footman,---	19	S.	Franklin,-----		Ankle broken and hip injured. Struck by runaway car at foot of slope.
Aug. 5	Mike Muluš,-----	Lithuanian	Miner,-----	47	M.	Stanton No. 7,-----		Four ribs fractured by fall of coal at face of chamber.

Aug. 24	Stanley Kurdosky, ---	Polish, ---	Laborer, ---	28	S. Warrior Run, ---	Leg broken and head and face cut by fall of coal at face of chamber.
28	Andrew Smith, ---	Polish, ---	Miner, ---	39	M. Baltimore Tunnel, ---	Right leg broken. Struck by piece of top rock.
28	John J. Williams, ---	Welsh, ---	Road cleaner, ---	62	M. Warrior Run, ---	Shoulder blade, two ribs and right leg broken. Struck by man-car on slope.
28	Ignatz Goolskie, ---	Polish, ---	Miner, ---	36	M. Warrior Run, ---	Hip deeply cut and arm injured by runaway car that collided with man-car on slope.
Sept. 2	John Martis, ---	Slavonian, ---	Laborer, ---	52	M. Maxwell No. 20, ---	Finger crushed. Caught between loaded cars at foot of shaft tower. Outside.
9	Charles Durgadika, ---	Polish, ---	Patcher, ---	19	S. South Wilkes-Barre, ---	Shoulder dislocated. Squeezed between ear and rib in stable.
10	John Waulick, ---	Polish, ---	Miner, ---	51	M. Maxwell No. 20, ---	Collar bone fractured. Struck by slope rope which threw him to the ground.
12	John Covelski, ---	American, ---	Slate picker, ---	15	S. Stanton No. 7, ---	Fingers crushed. Fell between chain sprocket on slate-picker. Outside.
25	Taddy Ostroski, ---	Polish, ---	Breaker sweeper, ---	15	S. Sugar Notch No. 9, ---	Fingers crushed. Caught between bar and coupling while uncoupling cars. Outside.
29	Anthony Whitakunis, ---	Polish, ---	Patcher, ---	17	S. South Wilkes-Barre, ---	Compound fracture of left leg below knee. Fell under a car of rock.
Oct. 2	Evan Davis, ---	Welsh, ---	Miner, ---	45	M. Stanton No. 7, ---	Left arm fractured. Struck by flying coal from blast.
9	Patrick Gallagher, ---	Irish, ---	Miner, ---	60	M. Baltimore Tunnel, ---	Two ribs broken. Struck on left side of back by piece of rock that fell off rib.
17	Joseph Dauksy, ---	Lithuanian, ---	Miner, ---	45	M. Stanton No. 7, ---	Compound fracture of right leg and three ribs fractured. Struck by empty trip on slope.
31	Ben Rokupski, ---	Polish, ---	Patcher, ---	17	S. Stanton No. 7, ---	Small bone in left leg fractured. Caught between bumpers of empty cars while uncoupling them.
Nov. 5	Ziga Debra, ---	Polish, ---	Laborer, ---	22	S. Maxwell No. 20, ---	Leg fractured. Struck by slope rope while crossing it.
10	Patrick McGuire, ---	American, ---	Laborer, ---	31	M. Maxwell No. 20, ---	Face and hands burned by explosion of gas at face of chamber.
10	John Miller, ---	Austrian, ---	Helper, ---	24	M. Prospect, ---	Top of thumb cut off. Caught between sprag and wheel.
20	Lawrence Okapa, ---	Polish, ---	Laborer, ---	30	M. Maxwell No. 20, ---	Seriously burned by explosion of gas at face of chamber.
20	Frank Racesti, ---	Polish, ---	Miner, ---	40	M. Stanton No. 7, ---	Hip dislocated. Caught between cars of locomotive trip while stealing a ride to foot of shaft.
24	Andrew Gasnelo, ---	German, ---	Laborer, ---	43	M. Hadleigh, ---	Finger fractured and contusion of back by fall of top rock at face of chamber.
Dec. 3	Arthur Barney, ---	American, ---	Teamster, ---	38	M. Conyngham, ---	Collar bone and two ribs broken. Fell off wagon. Outside.
4	John Grovinski, ---	Polish, ---	Laborer, ---	23	S. Santon No. 7, ---	Leg fractured. Caught between loaded cars while riding on bumpers.

Luzerne,

TABLE 5.—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Mine	County	Nature and Cause of Accident in Brief
Dec. 4	Patrick Hanley, -----	Irish,-----	Patcher, -----	18	S.	Maxwell No. 20, ---		Wrist and nose broken. Caught between empty cars and locomotive trip.
10	John Doyle, -----	Welsh,-----	Laborer, -----	36	M.	Stanton No. 7, -----		Three fingers crushed between pieces of coal while loading a car.
14	Harry Airgood, -----	American,--	Runner, -----	24	S.	Stanton No. 7, -----		Middle finger of right hand crushed while uncoupling cars at foot of breaker plane. Outside.
17	Frank Lavage, -----	Polish,-----	Miner, -----	42	M.	Stanton No. 7, -----	Luzerne, -----	Leg fractured. Struck by piece of coal that burst off rib.
21	James Reynolds, -----	American,--	Machinist, -----	52	M.	Hillman, -----		Base of skull fractured by lever that slipped while he was moving a piece of machinery. Outside.
23	Henry Williams, -----	Welsh,-----	Driver, -----	20	S.	South Wilkes-Barre, -----		Small bone of right hand fractured. Caught between end of door and side of car.
29	Stephen Zink, -----	American,--	Company laborer,-----	57	M.	Baltimore Slope Washery.		Arm fractured between wrist and elbow. Struck by water hose nozzle. Outside.



FEATURES AT
 HEAD OF NO. 1 SLOPE
 WARRIOR RUN COLLIERY.
 SHOWING SCENE OF
 ACCIDENT OF AUGUST 28TH, 1908.
 Sept 1st, 1908. - L.V.C.CO. - Scale 1" = 60'
 ENG DEPT. WYOMING DIVISION,
 WILKES-BARRE, PA.

WARRIOR RUN ACCIDENT

August 28, at 4.30 P. M., in Red Ash Slope, Warrior Run Colliery, Lehigh Valley Coal Company, an accident occurred by which six men were killed and five injured. The accident has a number of peculiar features about it that will be best understood by referring to the accompanying plan showing the arrangement of tracks about the head of the slope upon which the accident occurred.

The empty cars were run by gravity from the breaker plane to head block near the head of the slope over the light track shown in plan. It was the duty of the car runners to run the empty cars with sprags from the head of the breaker plane to head of the slope, also the loaded cars from head of the slope to head of the breaker plane. Orders had been given to these car runners to take a car of manure, as shown by arrows, from a point A to the hole B down which the manure was to be put for use in building a dam inside the mine. The method of doing this should have been to run the car, properly spragged, to the head block at C along the light track which had an average grade of 1.93 per cent. At C it should have been stopped and attached to the hoisting rope passing over the drum D and used for hoisting up the main slope. The car should then have been pulled past the spring switch E, stopped before reaching the slope track and then dropped back along the loaded track, and, after having been detached from the rope, allowed to run by gravity to the hole B attended by the car runner. This procedure was, however, not carried out, and the evidence shows that instead of the car loaded with manure being attended to by the regular car runners, this duty was being looked after by a headman whose business it was to attend a switch lever at the head of the slope at point F. This change of work was evidently an arrangement between the headman, who should have been at F, and the car runners, so that the runners might go home earlier without waiting to shift the car. Although the head block at C was known to have been in place some days prior to the accident it is probable that it was not in place on the day of the accident.

The superintendent of the colliery testified at the inquest that when he last examined the head of the slope the block was in place and that he was given no orders for it to be removed, and that any one giving such orders did so without authority. It was claimed that the head man stated to a witness immediately after the accident that he had ordered the head block removed, but this statement was denied by the headman at the inquest.

The car in running down the light track evidently gained greater headway than the man who was running it expected and he was unable to sprag it so that it would slow up before reaching the switch E. The evidence showed that instead of stopping the car at C and then transferring it from the light to the loaded track by attaching the car to the hoisting rope, an attempt was made to switch the car from the light to the loaded track without attaching the hoisting rope to the car. This point does not seem to be disputed by either side,

and the headman claims that it was a common practice to thus switch the cars, while the company officials claim that it was contrary to direct orders to do it. However this may be, an effort was being made to make such a switch at the time of the accident, but the car had gained such headway that it was impossible to stop it between the switches E and F. Consequently the car ran up the plane at the head of the slope to the point G opposite the foreman's office. To do this it was necessary for two wheels of the car to pass over the hoisting rope, which ordinarily stands taut about 5 inches above the track when the rope is down the slope and loaded as it was at the time of the accident. It was also necessary for the car wheels to turn switch at F, and ordinarily this would have left the switch in a position for the car to run back upon the loaded track. At this point the day after the accident, a trial hoist, under the condition at the time of the runaway, showed that the car was derailed each time that it was hoisted past switch F trusting to the switch being thrown by the car wheels instead of by hand as was customary. Hence the conditions were such that the car should have been derailed before reaching the main slope even though the head block at C was not in place.

The evidence brought out at the inquest showed that when a car had previously run away under similar conditions and had passed the head block at C, it had gone up the slope and returned upon the loaded track as was to be expected. At the time of the accident, however, the car passed over the rope, the switch F was thrown, and after reaching a point G the car returned down the slope for a distance of 900 feet, where it came in contact with man-cars, attached to the hoisting rope, containing twenty men ready to be hoisted to the surface. The impact broke the rope cone and allowed the cars and men to fall 200 feet farther down the slope, killing 6 men and injuring 5 others.

The verdict of the Coroner's Jury was as follows:

"We find that James Gallagher, Julius Muscavage, Peter Ostrafsky, Adam Buscavage, John Tokarshak, and Frank Propota, came to their deaths from injuries received August 28, 1908, at Warrior Run Colliery of the Lehigh Valley Coal Company in a collision on a slope between a man-car coming up and a loaded car going down.

The evidence shows that a car loaded with manure was being run down a plane with a pitch of one and one-eight degrees towards the mouth of the slope with the intention of switching it off on another track before it reached the mouth of the slope, but the head-man who was running the car at the time lost control of it and it ran down past the mouth of the slope up on the apex and then backswitched and ran down the slope, meeting the man-car coming up.

The evidence shows also that the customary head-block near the head of the slope was not in place, it having been previously removed. It is quite evident to us that had this head-block been in place the accident would have been avoided.

We, therefore, find that the outside foreman, whose duty it was to look after this safety device, was negligent in his duties in not maintaining in good condition a head-block near the head of this slope as Article 12, Rule 50, of the Anthracite Mine Laws directs. We find too that the head-man and the two runners were guilty of contributory negligence in running cars over the tracks at this point with the head-block missing."

Immediately after the verdict of the Coroner's Jury I entered prosecution against John L. Williams, outside foreman, and John Stinson, head-man, and the following is Judge Fuller's opinion on the case:

Opinion of Judge Fuller, is as follows:

Commonwealth of Pennsylvania,	} ss:
vs.	
John Stinson and John L. Williams.	

This man John Stinson is charged with a specific offence of violating Rule 40, Article 12, namely: "At every shaft or slope in which provision is made in this act for lowering and hoisting persons, a head-man and foot-man shall be designated by the superintendent or foreman to be at their proper places from the time that persons begin to descend until all persons who may be at the bottom of said shaft or slope when quitting work, shall be hoisted; such head-man and foot-man shall personally attend to the signals and see that the provisions of this act in respect to lowering and hoisting persons in shafts or slopes shall be complied with."

The Commonwealth contends that if Stinson had not left his proper place, viz., at or near the head of the slope, he could by moving the lever of the device have turned the runaway car upon the connecting track and thus the accident would have been prevented.

His counsel contends, contra, (1) that he violated no duty of his employment by leaving the head of the slope to bring down the car, (2) that at least under all the circumstances, he was not negligently guilty of an offence, (3) that he was in fact at or near the head of the slope when the car started down the same, (4) that there was absolutely no casual connection whatever between his act in going from the head of the slope and the accident; in other words, that the accident was not nor could have been the result of his act.

Was he negligently guilty? He was a boy under age. His instruction from his superior authorized him to leave when the last car of coal was hoisted. The last car of coal had been hoisted just before quitting time, and while he actually started for the car just before quitting time, yet that time actually arrived before the car got under way.

Whether it was right for the head-man to take orders from the inside foreman is one of the ambiguities that the act does not define, but be this as it may, the work actually assigned to him did not take him repeatedly away from the head of the slope to different places around the yard.

The responsibility for this should rest where it belongs, upon the superior who gave the instructions, and not upon the inferior who obeyed them.

In this quasi criminal proceeding, in which a conviction might be attended by fine and imprisonment, the conclusion of guilty should be based upon more than a mere infraction of law. We cannot find under the circumstances that he was negligently guilty of an offence when his act was within the scope of his actual employment although not within the actual mandate of law.

Furthermore, when the car started upon its plunge down the slope he was in fact very near, not more than twenty feet distant from the slope track and not more than forty feet distant from the point of connection between that track and the other track.

He had accompanied the car as far as the safety block, where he jumped off, awaiting its return by gravity when it should come to a stop. At that distance, in the absence of specific definition by the act, it would seem unreasonable to find that he was not "at his proper place." We are also unable to discover any casual connection, or possible casual connection which the law can consider between his act in going from the head of the slope and the accident. In other words, we are unable to conclude that the accident was or might have been the result of his act. It was proper of course that some one should bring the car down. If he had remained all the time close to the head and the other car had been brought down by the runner, it is altogether likely that he would not have had the time or the thought to throw the lever and the result would have been just the same. An inquiry of this character should be governed by probability rather than by possibility, and in this case we cannot say that there was even the probability of a different result.

It follows that John Stinson must be adjudged, as we do now adjudge him, not guilty of the offence charged against him in this information.

The Case of John L. Williams

In the case against John L. Williams, outside foreman, the gist of Judge Fuller's opinion is as follows:

This man is charged with a specific offence of violating Rule 50, Article 12, viz: "Safety blocks or some other device for the purpose of preventing cars from falling into a shaft or running away on a slope or plane shall be placed at or near the head of every shaft, slope or plane, and said safety blocks or other device must be maintained in good working order."

Here then in a nutshell is the case against this defendant, viz: A safety block had been provided for the purpose of preventing the entrance of runaway cars upon the slope in question. The duty of maintaining this block in good working order devolved upon the outside foreman. He disregarded this duty and allowed the block to become ineffective; from this condition the accident resulted. He was guilty of an offence against the act.

Was he negligently guilty? Violation is not enough. It must be accompanied with negligence in order to convict. In the present case the safety block had been out of order for some time, perhaps, for as long as three weeks, and certainly for a period long enough to affect with knowledge of its condition the foreman who must have been in constant, close proximity. Beyond a doubt, therefore, according to law, he was negligent. This conclusion is irresistible.

Under all the circumstances, we are able to find that the negligence was wilful, or gross, or of higher grade than the ordinary inattention whereof even careful men may be guilty at times. This view would seem more convincing if the only damage had been a slight loss of property and not an awful loss of human life, but the character of the catastrophe must not blind the eyes to the character of human default by which it was occasioned.

We believe that the ends of justice will be fully met by suspension of sentence in a case where conviction itself must carry its own condign punishment.

Accidents will happen in and around the mines no matter how great a degree of care is exercised, but many of the distressing fatalities could be avoided if employes were made to feel that acts of gross and inexcusable carelessness made them liable to criminal prosecution. In all mines, no matter how well they are planed and conducted, danger constantly exists, and most of the accidents that occur in and around the mines are due to carelessness. In nearly all the cases the law does not and cannot be made to apply.

Intelligence, the education of experience, accurate judgment and the power to enforce rigid discipline cannot be implanted in men by legislative enactment.

ACCIDENT AT MIDVALE SLOPE, PROSPECT COLLIERY

At 12.30 noon, May 13, a fall of roof occurred in No. 4 lift road, No. 246 Bowkley vein in Midvale slope, Lehigh Valley Coal Company, by which Martin Degnan, timberman, Andrew Wasko, timberman's helper, Paul Bozent, miner, Peter Zwinski, driver, and Michael Libzak, doorboy, were instantly killed and two others slightly injured. It appears from testimony taken at the Coroner's inquest held at Wilkes-Barre, that Anthony Smith, runner, had run a trip of two loaded cars down a section and had failed to place the proper number of sprags in the wheels, which allowed the trip to get beyond control. When the trip landed on the gangway road it jumped the track discharging four props that stood on the lower side of the road, and a portion of the roof fell on top of the cars. The runner sent the driver to call the timberman to replace the cars on the track and to secure the roof. When the timberman arrived they replaced one of the cars on the road and pushed it back so that they could replace the other derailed car and the props. While this was being done, a large piece of top rock fell, without warning, catching seven of them. It also appears from the testimony that the timberman had failed to sound or examine the roof before they commenced to work at the derailed cars. He should have seen that the roof was safe to work under, knowing that all the props under this particular piece of rock had been discharged.

The following is the verdict of the Coroner's jury in the case:

"We find that Martin Degnan and others came to their death from injuries received at the Midvale Slope of the Prospect Colliery of the Lehigh Valley Coal Company, May 13, 1908. The evidence shows that a run-away occurred in the gangway, the cars jumping the track and knocking out four props that stood along the side of the gangway to protect the roof. A fall of rock occurred which Martin Degnan attempted to remove. Others were watching his movements when a second fall took place fatally injuring five men. The props that were

knocked out were not reset, nor had any precaution been taken to secure the roof by the workmen before trying to get the cars back on the track.

We therefore find that the men took no precaution whatever for their own safety and that the said company were in no way responsible for the accident. Jury: John Nygren, Patrick Hourigan, William Bower, Griffith Pritchard, F. D. Vincent, W. S. Casterlin."

CONDITION OF COLLIERIES

LEHIGH AND WILKES-BARRE COAL COMPANY

Hollenback No. 2 Colliery.—Ventilation, drainage and general condition as to safety good. Ventilation very much improved by erecting several new air bridges.

South Wilkes-Barre No. 5 Colliery.—Ventilation good; roads and drainage good; condition as to safety good.

Stanton No. 7 Colliery.—Ventilation good; roads and drainage good; condition as to safety good.

Sugar Notch No. 9 Colliery.—Ventilation fair; roads and drainage fair; condition as to safety good.

Maxwell No. 20 Colliery.—Ventilation good; roads and drainage good; condition as to safety good.

LEHIGH VALLEY COAL COMPANY

Prospect Colliery.—Ventilation good; roads and drainage fair; condition as to safety good.

Dorrance Colliery.—Ventilation good; roads and drainage fair; condition as to safety good.

Franklin Colliery.—Ventilation good; roads fair; drainage and condition as to safety good.

Warrior Run Colliery.—Ventilation good; roads and drainage fair; condition as to safety good.

DELAWARE AND HUDSON COMPANY

Baltimore No. 5 Colliery.—Ventilation good; roads and drainage good; condition as to safety good.

Baltimore Tunnel Colliery.—Ventilation good; roads and drainage good; condition as to safety good.

Conyngham Colliery.—Ventilation good; roads and drainage good; condition as to safety good.

RED ASH COAL COMPANY

Red Ash Nos. 1 and 2 Collieries.—Ventilation good; roads and drainage fair; condition as to safety fair.

PITTSTON COAL MINING COMPANY

Hadleigh Colliery.—Ventilation good; roads and drainage fair; condition as to safety good.

WILKES-BARRE AND SCRANTON COAL AND IRON COMPANY

Hillman Vein Colliery.—Ventilation good; drainage good; condition as to safety good.

IMPROVEMENTS

LEHIGH AND WILKES-BARRE COAL COMPANY

Hollenback No. 2 Colliery, Inside.—No. 26 Tunnel—Bottom Red Ash to Top Red Ash.

Rock plane airway Bottom Red Ash to Top Red Ash.

New pumping plant Baltimore Shaft level.

Outside.—New shaft hoisting engines for Baltimore level.

Remodeling breaker and annex.

Steel head frame.

South Wilkes-Barre No. 5 Colliery, Inside.—No. 19 Tunnel, Hillman to Kidney.

No. 21 Tunnel, Baltimore to Five Foot.

No. 22 Tunnel, Baltimore to Five Foot.

No. 20 Tunnel, Hillman to Kidney.

No. 23 Tunnel, Top Baltimore to Bottom Baltimore.

Rock plane airway, Bottom Baltimore to Top Baltimore.

Outside.—Paving retail wagon road, and new scales.

Stanton No. 7 Colliery, Inside.—No. 13 Tunnel, Hillman to Hillman.

No. 14 Tunnel, Baltimore to Five Foot.

Slush Hole, Surface to Baltimore.

No. 12 Tunnel, Skidmore to Hillman.

No. 29 Tunnel, Stanton to Hillman.

Sugar Notch No. 9 Colliery, Inside.—No. 21 Tunnel, Twin to Cooper.

No. 9 Tunnel, Extended to Five Foot.

No. 20 Tunnel, Ross to Baltimore.

No. 15 Tunnel, Extended to Hillman.

Maxwell No. 20 Colliery, Inside.—Tunnel, Top Red Ash to Bottom Red Ash.

Tunnel, Top Red Ash to Bottom Red Ash.

No. 22 Tunnel, Baltimore to Five Foot.

No. 24 Tunnel, Baltimore to Five Foot.

New pumping plant, 4th Lift.

Outside.—Dust system installed in breaker.

LEHIGH VALLEY COAL COMPANY

Prospect, Outside.—Repairs to breaker. New refuse conveyor line.

Inside.—Air shaft from Lower to Upper Baltimore in Klondyke Slope district. Motor haulage in Red Ash and Baltimore veins extended.

Henry, Outside.—Preparations to reclaim Enterprise culm bank on east of Plank Road. Series of surface test holes for Hillman vein rock cover.

Inside.—Second opening traveling way to surface for No. 8 Slope workings.

Rock return air course for Wyoming Lower Baltimore workings completed.

Tail rope engine plane No. 5 Slope, Wyoming Skidmore vein, started.

Concrete steel overcast, No. 15 plane, completed.

Considerable work done repairing and improving No. 2 Lift, No. 10 Slope.

Dorrance, Outside.—No. 4 air shaft 13 feet 10 inches x 25 feet 2 inches from surface to Baltimore completed. 28 x 7½ foot Dickson-Guibal fan, driven by 24 x 48 Allis-Chalmers, 4 valve Corliss engine, capacity 300,000 cubic feet per minute at 3 inches W. G. installed and operating.

35 x 12 foot Guibal fan house and drift completed; to ventilate the Hillman vein district when change from present location is completed.

No. 3 air shaft, wooden cribbing removed and lined with concrete to vein, and provided with iron ladders for second opening traveling way.

Inside.—New motor road in Hillman vein completed.

Rock plain gangways in Abbott vein reopened.

Silting operations in Hillman West Plain district.

Engines installed on No. 23 Red Ash Slope.

No. 6 Extension Slope reopened.

No. 21 Slope, Hillman vein, connected with No. 17 Tunnel.

Hillman vein new stable extended.

Concrete arch at Hillman vein landing started.

New brick hospital in Red Ash vein.

Franklin, Outside.—Extensive repairs to breaker and breaker machinery.

Washery dismantled.

Series of surface test holes for Snake Island rock cover.

Inside.—New plane in Abbott vein, No. 2 lift, completed.

New manway for No. 7 Slope, Sump vein, completed.

New manway for No. 2 Slope, Sump vein, completed from No. 2 lift to surface.

New manway to No. 9 Slope, Top Red Ash, completed.

Debris from Bowkley surface cave cleaned.

Water in Baltimore vein lowered to No. 2 level.

Baltimore No. 2 West lift reopened, and engine installed on No. 14 Slope. No. 2 Slope Sump vein extended from No. 1 to No. 2 level.

No. 15 Slope in Bowkley started.

Drift level Baltimore West reopened and gangways extended west.

Drift level Skidmore and Ross veins gangways cleaned and reopened.

No. 22 Tunnel Forty Fort vein gangways cleaned and reopened.

Hillman No. 2 west gangway cleaned and reopened. No. 10 Skidmore Slope extended below No. 8 Tunnel level.

Pump installed and water lowered in No. 9 Slope.

No. 8 Slope, Red Ash (Top) extended through rock to Bottom Red Ash on No. 3 Slope level.

New return air course in Baltimore between Hillman and No. 1 levels completed.

Diamond drill provings in Drift level. Silting operations in Rock Slope and Baltimore vein district.

Warrior Run, Outside.—Back switch head on No. 1 or Buck Mountain slope; engine plane and tippie to dump mine cars into railroad cars for transportation to Seneca colliery for preparation.

Boiler fuel conveyor line for washery.

Crusher and conveyor line to reclaim culm bank south of breaker.

Ash and rock bank fire confined to harmless territory. Two shafts and two churn drill bore holes and 2 crushing outfits were necessary to accomplish this. Diamond drill proving for overlying veins.

Inside.—Reopened "D" vein on outcrop.

Reopened "C" No. 1 Lift, east.

Reopened "F" No. 3 Lift, east.

New slope in "C" No. 2 west to north dip.

Telephone communication throughout.

Silting operations in South and North basins.

DELAWARE AND HUDSON COMPANY

Conyngham.—Shaft retimbered and relined.

Baltimore No. 2.—No. 10 Slope, Ross Vein, extended 825 feet to limit and completed.

No. 11 Slope extended to limit of property, a distance of 200 feet.

No. 8 Plane graded and driven 410 feet.

Baltimore No. 5.—Hole for slushing refuse into mines drilled to depth of 739 feet.

MINE FOREMEN'S EXAMINATIONS

The examination of applicants for certificates of qualification as mine foremen and assistant mine foremen was held May 19 and 20, at the Y. M. C. A. Building, Wilkes-Barre.

The Board of Examiners was composed of Thomas H. Price, Inspector, F. H. Kohlbraker, Superintendent, Thomas D. Lloyd and Patrick McGrane, Miners.

The following persons passed a satisfactory examination and were granted certificates:

Mine Foremen

Edward W. Davis, Charles Enzian, James Stevens, Wilkes-Barre; James Gallagher, Pittston; Lewis R. Thomas, John B. Magee, Henry R. Kettle, David R. Jones, Plymouth; Henry H. Hughes, Wyoming; James C. Wallace, Dorranceton.

Assistant Mine Foremen

Thomas Beynon, Bernard Conyngham, William R. Davis, Charles Hammonds, William R. Humpleby, Peter Johnson, John N. Jones, David Werner, Wilkes-Barre; Henry Carver, David S. Jones, David

W. Jones, Harry Jones, Milton Jones, Thomas R. Jones, Joseph Linchey, Thomas Maggs, Richard Morgan, David J. Phillips, S. Fuller Reynolds, Charles H. Van Loon, William Coates, Thomas R. Richards, Plymouth; George Davies, Arthur Davis, John H. Davis, Jenkin Evans, George Fulton, C. D. Gallagher, Peter Daley, Harry Goulston, Thomas James, William L. James, David J. Jenkins, Charles Johnson, William W. Jones, Frank Ketrick, Anthony Lenahan, Daniel Lewis, William Rowley, Edward Llewellyn, Thomas L. McGuire, Edward Minett, Evan T. Walters.

Eighth District

LUZERNE AND LACKAWANNA COUNTIES

Kingston, Pa., February 27, 1909.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor to transmit herewith my annual report as Inspector of Mines of the Eighth Anthracite District for the year ending December 31, 1908.

The report contains the usual tables and statistics, with a brief description of the most important improvements made at the collieries, and also a brief description of fatal accidents.

Respectfully submitted,

P. M. BOYLE, Inspector.

SUMMARY OF STATISTICS

Number of collieries,	17
Number of mines,	33
Number of mines in operation,	27
Number of tons of coal shipped to market,	3,428,853
Number of tons used at mines for steam and heat,	442,543
Number of tons sold to local trade and used by employes,	86,581
Number of tons produced,	3,957,977
Number of tons produced by compressed air machines, ...	—
Number of tons produced by electrical machines,,	—
Number of persons employed inside of mines,	7,143
Number of persons employed outside,	2,297
Number of fatal accidents inside of mines,	50
Number of fatal accidents outside,	3
Number of non-fatal accidents inside of mines,	76
Number of non-fatal accidents outside,	17
Number of tons of coal produced per fatal accident inside,	79,160
Number of persons employed per fatal accident inside, ..	143
Number of persons employed per fatal accident outside, ..	766
Number of persons employed per non fatal accident inside, ..	94
Number of persons employed per non-fatal accident out- side,	135
Number of wives made widows,	30
Number of children orphaned,	59
Number of steam locomotives used inside of mines,	3
Number of steam locomotives used outside,	9
Number of compressed air locomotives used inside,	3
Number of electric motors used inside,	22
Number of fans in use,	36
Number of gaseous mines in operation,	17
Number of non-gaseous mines in operation,	10
Number of old mines abandoned,	6

TABLE A

PRODUCTION OF COAL

Names of Operators	Tons
Lehigh Valley Coal Company,	1,368,529
Temple Iron Company,	881,198
Kingston Coal Company,	752,399
Clear Spring Coal Company,	242,272
Peoples Bank of Wilkes-Barre, Receivers,	182,109
Stevens Coal Company,	176,662
East Boston Coal Company,	142,059
Raub Coal Company,	120,595
Delaware, Lackawanna and Western Railroad Company,	67,771
Dunn Coal Company,	20,143
Troy Coal Company,	4,330
Total,	<u>3,957,977</u>

Production by Counties

Luzerne,	3,687,505
Lackawanna,	270,472
Total,	<u>3,957,977</u>

TABLE B.—Fatal and non-fatal accidents inside and outside of mines; number of tons of coal produced per accident; number of persons employed; number employed per accident

Names of Operators	Fatal Accidents			Non-fatal Accidents			Total	Tons of coal produced per fatal accident inside	Tons of coal produced per non-fatal accident inside	Number of employees inside	Number of employees outside	Total number of employees	Number of employees inside per fatal accident	Number of employees outside per fatal accident	Number of employees inside per non-fatal accident	Number of employees outside per non-fatal accident
	Inside	Outside	Total	Inside	Outside	Total										
	12	1	13	18	6	24										
Lehigh Valley Coal Co.,	20	1	20	24	6	30	114,044	76,659	2,087	695	2,782	174	695	116	116	
Temple Iron Co.,	5	1	6	13	1	14	44,060	36,717	2,114	459	2,573	106	459	88	77	
Kingston Coal Co.,	5	1	6	13	1	14	150,480	57,877	1,021	323	1,344	204	323	79	323	
Clear Spring Coal Co.,	5	1	6	13	1	14	48,451	21,133	552	196	748	110	196	59	59	
Peoples Bank of Wilkes Barre, receivers,	5	1	6	13	1	14	36,422	36,422	296	126	422	59	126	70	60	
Stevens Coal Co.,	2	1	3	7	2	9	88,331	44,166	277	127	304	139	127	42	42	
East Boston Coal Co.,	2	1	3	7	2	9	142,059	30,291	294	127	421	145	127	72	72	
Ramb Coal Co.,	1	1	2	5	1	6	120,505	30,126	286	145	431	145	145	56	56	
Delaware, Lackawanna and Atlantic Railroad Co.,	1	1	2	5	1	6	67,771	67,771	145	56	201	145	56	145	145	
Miscellaneous companies,	50	3	53	76	17	93	79,160	52,079	7,143	2,297	9,440	143	706	94	135	
Totals and averages for district,	50	3	53	76	17	93	79,160	52,079	7,143	2,297	9,440	143	706	94	135	

Table C.—Classification of Fatal Accidents Inside and Outside of Mines

	Months												Percentages
	January	February	March	April	May	June	July	August	September	October	November	December		Totals
Causes of Accidents Inside													
Falls of coal, -----	1		1					1	1			4	8.00
Falls of roof, -----	2		3	2	2		1		2		4	17	34.00
Mine cars, -----		2	1			1				1	1	6	12.00
Explosions of gas and dust, -----					12						1	13	26.00
Explosions of powder and dynamite, -----	1											1	2.00
Premature blasts, -----			1	1				1		2		6	12.00
Falling into shafts, -----				1								1	2.00
Electricity, -----			1									1	2.00
Miscellaneous, -----						1						1	2.00
Totals, -----	4	2	7	4	14	2	1	2	3	2	3	50	100.00
Causes of Accidents Outside													
Cars, -----						1					1	1	33.33
Machinery, -----												2	66.67
Totals, -----						1					2	3	100.00
Grand totals inside and outside, -----	4	2	7	4	14	3	1	2	3	2	5	53	

TABLE D.—Classification of Non-fatal Accidents Inside and Outside of Mines

	Months												Percentages	
	January	February	March	April	May	June	July	August	September	October	November	December		Totals
Causes of Accidents Inside														
Falls of coal, -----	1			1					1			2	5	6.58
Falls of slate, -----								1	1			1	1	1.32
Falls of roof, -----	2	1	1			2		1	2	2		2	11	14.48
Mine cars, -----		1	3			1	2	2	2	2	1	5	21	27.63
Explosions of gas and dust, -----	2		1	2	13						3		21	27.63
Explosions of powder and dynamite, -----					1	3							4	5.26
Premature blasts, -----	1					1			2		1	2	7	9.21
Mules, -----	1									1			2	2.63
Miscellaneous, -----				1		2		1					4	5.26
Totals, -----	7	2	5	4	16	9	2	4	6	5	5	11	76	100.00
Causes of Accidents Outside														
Cars, -----		1		1	2					2		1	7	41.17
Machinery, -----					1					1		1	3	17.66
Miscellaneous, -----		1	3				1	1		1			7	41.17
Totals, -----		1	4		1	3		1	1	4		2	17	100.00
Grand totals inside and outside, -----	8	6	5	5	19	9	3	5	6	9	5	13	93	

TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Miners, -----	2	2	2	2	2			1	2	2		1	25
Miners' laborers, -----	1		2	2	2		1	1			2	4	14
Drivers and runners, -----			1		4	1					1	1	5
Company men, -----													6
Totals, -----	4	2	7	4	14	2	1	2	3	2	3	6	50
Outside													
Slatepickers (boys), -----						1					1		2
All other employes, -----											1		1
Totals, -----						1					2		3
Grand totals inside and outside, --	4	2	7	4	14	3	1	2	3	2	5	6	53

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Miners, -----	3	1		2	5	5		2	3	2	4	2	33
Miners' laborers, -----	1		2	1	4	1	1	1	1	1	2	2	13
Drivers and runners, -----		1	2	1		1	1		1	2	1		7
Doorboys and helpers, -----							1					1	2
Pumpmen, -----	1				1								1
Company men, -----					4								4
All other employes, -----													
Totals, -----	7	2	5	4	16	9	2	4	6	5	5	11	76
Outside													
Foremen, -----	1												1
Blacksmiths and carpenters, -----		1											1
Slatepickers (boys), -----		1			1				3		1		6
All other employes, -----		2		1	2		1	1		1		1	9
Totals, -----	1	4		1	3		1	1		4		2	17
Grand totals inside and outside, --	8	6	5	5	19	9	3	5	6	9	5	13	93

TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
American, -----					2							1	3
English, -----					1								1
Irish, -----											1		1
Polish, -----	4		3	2	5	1	1	1	1	1		2	22
Hungarian, -----											1		1
Italian, -----		2	1		5				1				9
Slavonian, -----			1								1	3	5
Lithuanian, -----			1	2		1			1		1		6
Austrian, -----			1										1
Russian, -----					1	1		1		1			4
Totals, -----	4	2	7	4	14	3	1	2	3	2	5	6	53

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
American, -----	2	1	1		5	3	3			2	1	3	21
English, -----					1	2				1		1	5
Welsh, -----		1			1				1				3
Irish, -----								1		1			2
German, -----													1
Polish, -----	4	2	3	2	9	4		2	3	2	1	5	37
Italian, -----					2								2
Slavonian, -----	1			1	1				1	1		1	5
Lithuanian, -----		1						2	1	1	3	1	9
Austrian, -----	1		1	2					1				5
Russian, -----		1							1				2
Totals, -----	8	6	5	5	19	9	3	5	6	9	5	13	93

TABLE I.—Operators and mines, kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace, per minute, number of splits of air currents, and number of persons employed inside

Names of Operators and Mines	Kind of opening	Gaseous or non-gaseous	Method of ventilation	Diameter of fan in feet	Width of blades in feet	Depth of blades in feet	Number of revolutions per minute	Water gauge developed—in inches	Name of fan	Power used	Number of splits of air currents	Number of cubic feet of air per minute entering the mine at inlet	Total quantity of air per minute circulating in all the splits in cubic feet	Number of cubic feet per minute issuing out at outlet	Number of persons employed inside
Lehigh Valley Coal Co. Exeter Colliery:	Shaft, ----	Gaseous,	2 fans, --	20	6.8	5.10	76	{ 1.5 1.5	{ Guibal, -- Guibal, --	{ Steam, --- Steam, ---	9	209,485	137,248	255,247	366
Red Ash No. 2, ----	Shaft, ----	Gaseous,	Fan, ----	20	5.11	5.11	60	1.5	Guibal, --	Steam, ---	6	127,818	101,345	129,082	119
Pittston and Marcy No. 1, Knight and Checker,* ----	Shaft, ----	Gaseous,	Fan, ----	20	6.11	6.7	60	1.5			3	108,950	86,355	108,005	70
Maltby Colliery:	Shaft, ----	Gaseous,	2 fans, --	{ 25 20	{ 8.11 5.11	{ 6.10 5.8	{ 72 82	{ 3 2.5	{ Guibal, -- Guibal, --	{ Steam, --- Steam, ---	10	152,518	152,220	178,225	318
Mountain Tunnel, Four Foot Slope, ----	Tunnel, -- Slope, ---	Non-gas., Non-gas.,	Fan, ---- Fan, ----	6 12	1.6 4	1.4 4	180 82	.5 .5			3 2	41,232 61,715	41,200 60,347	48,200 66,150	30 8
William A. Colliery:	Shaft, ----	Non-gas.,	Fan, ----	18	4.875	5.167	75	.7			4	77,460	65,020	78,540	104
Lawrence,* ----	Shaft, ----	Non-gas.,	Fan, ----	18	5	4	75	.8			3	37,400	35,400	37,700	91
Babylon,* ----	Shaft, ----	Non-gas.,	Fan, ----	12	4	4	80	.3	Guibal, --	Steam, ---	2	92,100	19,900	22,550	42
Babylon,* ----	Shaft, ----	Non-gas.,	Fan, ----	20	5.25	5.75	75	1.3			3	84,125	73,155	89,075	130
Number 10, ----	Tunnel, --	Non-gas.,	Fan, ----	6	3	1.417	90	.1			2	16,250	15,190	16,350	41
Westmoreland Colliery: Westmoreland No. 1, ----	Tunnel, --	Gaseous,	Fan, ----	16	5	47	54	.5	Guibal, --	Steam, ---	2	125,000	112,000	131,000	210

* Abandoned.

Seneca Colliery:									
Twin Shaft,	Gaseous,	Fan, ----	20	6	72	1.2	} Gaibal, --	Steam, ---	7
Coxey,*	Gaseous,	Fan, ----	20	6	76	1			5
Pittston,	Gaseous,	Fan, ----	20	6	40	.5			1
Temple Iron Co.									
Harry E.,	Gaseous,	2 fans, --	{ 25	8	75	2.5	} Gaibal, --	Steam, ---	7
Forty Fort,	Gaseous,	Fan, ----	{ 15	4.5	90	.6			3
Mou. t Lookout,	Gaseous,	2 fans, --	{ 20	7	85	2.3			8
Kingston Coal Co.									
Number 1,	Gaseous,	2 fans, --	{ 25	8	76	1.8	} Gaibal, --	Steam, ---	7
Number 4,	Gaseous,	2 fans, --	{ 20	5	86	1.8			8
	Gaseous,	2 fans, --	{ 25	8	78	2			8
Clear Spring Coal Co.									
Clear Spring No. 1,	Gaseous,	2 fans, --	{ 24	8	60	2.5	} Gaibal, --	Steam, ---	6
	Gaseous,	2 fans, --	{ 20	6	60	1			6
Peoples Bank of Wilkes-Barre, Receivers									
Black Diamond No. 1,	Gaseous,	Fan, ----	20	6	6.5	1.9	Vulcan, --	Steam, ---	5
Stevens Coal Co.									
Stevens Colliery:	Gaseous,	Fan, ----	20	5	62	1.1	} Gaibal, --	Steam, ---	4
Number 1,*	Gaseous,	Fan, ----	20	6	60	1.1			4
Number 2,	Gaseous,	Fan, ----	25	8	76	2.7	Gaibal, --	Steam, ---	7
East Boston Coal Co.									
East Boston No. 1,	Gaseous,	Fan, ----	13	5	120	.8	} Gaibal, --	Steam, ---	2
Louise Colliery:	Non-gas.,	Tunnel, --							2
Mount Thomas,	Non-gas.,	Tunnel, --							2
Blondvke,	Non-gas.,	Slope, ---					} Gaibal, --	Steam, ---	3
Bennett,	Non-gas.,	Shaft, ---							1
Waddells,	Non-gas.,	Natural, --							63
Delaware, Lackawanna and Western Railroad Co.									
Pettebone Colliery:	Gaseous,	Fan, ----	22	6.2	120	1.7	} Dickson, --	Steam, ---	9
Pettebone No. 1,	Gaseous,	Fan, ----	35	10.1	52	2.3			9

*Abandoned.

TABLE I.—Continued

Names of Operators and Mines	Kind of opening	Gaseous or non-gaseous	Method of ventilation	Diameter of fan in feet	Width of blades in feet	Depth of blades in feet	Number of revolutions per minute	Water gauge developed—in inches	Name of fan	Power used	Number of splits of air currents	Number of cubic feet of air per minute entering the mine at inlet	Total quantity of air per minute circulating in all the splits in cubic feet	Number of cubic feet per minute passing out at outlet	Number of persons employed inside
Dunn Coal Co. Mountain Top, -----	Slope, ---	Non-gas.,	Natural, -----												
Troy Coal Co. Troy, -----	Tunnel, --	Non-gas.,	Fan, -----	16 44	4		58	.5	Guibal, ..	Steam, ----	3	46,254	39,460	47,000	35

TABLE 1.—Operators, location of collieries, railroads, etc.

Names of Operators and Collieries	County	Name of General Superintendent	Post Office	Name of Superintendent	Post Office	Railroad to Mine
Lehigh Valley Coal Co. Exeter, ----- Maitby, ----- William A., ----- Westmoreland, ----- Seneca, ----- Lawrence Washery, -----	Luzerne, ----- Luzerne, ----- Lackawanna, ----- Luzerne, ----- Luzerne, ----- Lackawanna, -----	S. D. Warriner, -----	Wilkes-Barre, -----	(Thomas Thomas, ----- Thomas Thomas, ----- W. D. Owens, ----- Thomas Thomas, ----- W. D. Owens, ----- W. D. Owens, ----- Pittston, -----)	Dorranecton, ----- Dorranecton, ----- Pittston, ----- Dorranecton, ----- Pittston, ----- Pittston, -----	Lehigh Valley
Temple Iron Co. Harry F., ----- Forty Fort, ----- Mount Lookout, -----	Luzerne, -----	F. H. Hemelright	Scranton, -----	George Steele, -----	Wyoming, -----	Lehigh Valley Lehigh Valley D., L. and W.
Kingston Coal Co. Kingston No. 4, -----	Luzerne, -----	F. E. Zerby, -----	Wilkes-Barre, -----	Thomas H. Williams, -----	Edwardsville, -----	D., L. and W. and D. and H.
Clear Spring Coal Co. Clear Spring, ----- Clear Spring Washery, -----	Luzerne, -----	J. L. Cake, -----	Pittston, -----	J. Paul Cake, -----	Pittston, -----	D., L. and W.
Peoples Bank of Wilkes-Barre, Receivers	Luzerne, -----	James B. Davies, -----	Plymouth, -----	James B. Davies, -----	Plymouth, -----	Lehigh Valley and D., L. and W.
Stevens Coal Co. Stevens, -----	Luzerne, -----	Henry W. Kingsbury, -----	Scranton, -----	David W. Evans, -----	Pittston, -----	Lehigh Valley
East Boston Coal Co. East Boston, -----	Luzerne, -----	W. L. Payne, -----	Kingston, -----	Peter Henderson, -----	Luzerne, -----	D., L. and W. and Lehigh Valley
Raub Coal Co. Louise, -----	Luzerne, -----	W. J. Thomas, -----	Luzerne, -----	W. J. Thomas, -----	Luzerne, -----	Lehigh Valley
Delaware, Lackawanna and Western Railroad Co. Pettebone, -----	Luzerne, -----	R. A. Phillips, -----	Scranton, -----	H. G. Davis, -----	Kingston, -----	D., L. and W.
Dunn Coal Co. Mountain Top, -----	Luzerne, -----	Lewis Edwards, -----	Edwardsdale, -----	Patrik Shovlin, -----	Larksville, -----	-----
Troy Coal Co. Troy, -----	Luzerne, -----	Martin J. Healey, -----	Plains, -----	W. J. Williams, -----	Pittston, -----	Lehigh Valley

TABLE 2.—Number of tons of coal mined, number of persons employed, number killed and injured, quantity of powder and dynamite used, etc.

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Number of kegs of powder used	Number of pounds of dynamite used	Number of horses and mules
Lehigh Valley Coal Co.												
Exeter, -----	Luzerne, -----	406,812	39,415	6,941	443,198	219	726	5	7	8,332	194,775	119
Mattby, -----	Luzerne, -----	232,154	28,752	4,305	265,201	215	649	1	6	8,039	140,349	95
William A., -----	Lackawanna, -----	183,370	27,870	2,922	214,162	191	562	---	1	8,687	16,025	82
Westmoreland, -----	Luzerne, -----	139,814	12,327	1,909	174,250	305	330	2	2	4,729	113,856	45
Seneca, -----	Luzerne, -----	151,511	38,049	2,748	193,308	292	500	2	4	11,132	17,273	83
		1,156,661	136,643	18,915	1,312,219	---	2,767	13	24	40,930	482,280	426
Lawrence Washery	Lackawanna, -----	53,210	---	---	56,310	187	15	---	---	---	---	---
Totals, -----		1,212,971	136,643	18,915	1,398,529	---	2,782	13	24	40,930	482,280	426
Temple Iron Co.												
Harry F., -----	Luzerne, -----	262,277	54,136	3,478	319,891	217	193	3	6	11,172	34,850	109
Forty Fort, -----		257,719	31,594	2,262	291,575	208	176	1	5	11,439	81,725	99
Mount Lookout, -----		228,572	31,609	4,560	269,752	249	876	16	19	10,294	130,900	60
Totals, -----		748,568	122,339	10,300	881,198	---	2,533	20	30	32,885	247,475	259
Kingston Coal Co.												
Kingston No. 4, -----	Luzerne, -----	694,903	52,280	5,216	752,399	282	1,314	6	14	25,921	27,637	198

Clear Spring, -----	Luzerne, -----	182,710	10,000	18,422	211,332	285	798	5	9,743	57,775	63
Clear Spring Washery, -----		25,159		5,381	30,940	216	20				
Totals, -----		208,169	10,000	24,103	242,272		748	5	9,743	57,775	63
Peoples Bank of Wilkes-Barre, Receivers											
Black Diamond, -----	Luzerne, -----	147,609	12,000		159,609	237	422	5	1,800	18,900	54
Black Diamond Washery, -----		22,500	22,500		22,500						
Totals, -----		147,609	34,500		182,109		422	5	1,800	18,900	54
Stevens, -----	Luzerne, -----	147,469	24,500	4,693	176,662	279	397	2	4,300	115,950	51
East Boston, -----	Luzerne, -----	111,178	25,000	5,881	142,059	154	421	7	3,439	14,500	54
Louise, -----	Luzerne, -----	95,874	15,695	8,936	120,505	134	431	5	5,255	23,850	35
Delaware, Lackawanna and Western Railroad Co.	Luzerne, -----	43,808	20,499	3,464	67,771	57	201	2	1,456	22,950	24
Pettebone, -----	Luzerne, -----	15,054	156	4,933	20,143	230	62		435	3,125	
Mountain Top, -----	Luzerne, -----	3,250	940	140	4,330	43	59		160	400	7
Troy, -----	Luzerne, -----	3,428,853	442,543	86,581	3,957,977		9,440	53	126,324	1,014,842	1,102
Grand totals, -----											

TABLE 2.—Part 2

Names of Operators	County	Number of Boilers				Locomotives			Number of steam engines of all classes	Total horse power	Number of pumps delivering water to surface	Capacity in gallons per minute	Quantity delivered to surface per minute—gallons	Number of electric dynamos	Number of air compressors
		Cylindrical	Tubular	Horse power	Total horse power	Steam	Air	Electric							
Lehigh Valley Coal Co.,	Luzerne and Lackawanna.	---	42	8,850	8,850	5	3	8	111	8,940	29	19,350	15,050	6	2
Temple Iron Co.,	---	---	24	6,430	6,430	2	---	7	69	4,000	10	12,850	5,500	3	5
Kingston Coal Co.,	---	9	4	600	3,300	1	---	4	24	3,450	6	7,500	4,320	3	2
Clear Spring Coal Co.,	---	3	10	1,500	1,650	---	---	2	7	550	3	4,000	3,000	1	---
Peoples Bank of Wilkes-Barre, Receivers,	---	---	18	2,518	3,118	1	---	---	41	2,045	3	5,400	3,750	1	2
Stevens Coal Co.,	---	2	7	875	1,475	1	---	1	22	1,883	5	4,300	2,750	1	1
East Boston Coal Co.,	---	2	5	1,600	1,600	---	---	---	27	1,538	2	4,000	2,800	2	2
Raub Coal Co.,	Luzerne,	---	8	890	860	2	---	---	20	1,445	2	750	450	---	---
Delaware, Lackawanna and Western Railroad Co.,	---	---	9	1,215	1,215	---	---	---	26	2,716	2	160	160	1	---
Dunn Coal Co.,	---	---	2	25	25	---	---	---	2	20	1	35	17	1	---
Troy Coal Co.,	---	---	5	400	400	---	---	---	3	185	2	200	180	1	1
Totals,	---	16	134	24,873	28,923	12	3	22	355	26,792	65	68,545	37,977	19	15

Table 3.—Number of each class of employees inside and outside of mines

Names of Operators and Collieries	County	Inside										Outside											
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Doorboys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Foremen	Blacksmiths and carpenters	Engineers and firemen	Slate pickers (boys)	Slate pickers (men)	Bookkeepers and clerks	All other employes	Total outside	Grand total inside and outside	
Lehigh Valley Coal Co.	Luzerne, -----	2	5	1	275	100	73	---	7	---	92	555	---	1	18	20	20	4	3	105	171	726	
	Exeter, -----	1	7	---	295	138	55	12	5	---	53	506	---	1	14	20	18	4	3	83	143	649	
	Maitby, -----	2	1	3	164	110	55	4	13	67	---	419	---	---	13	17	18	12	4	78	143	562	
	William A. Lackawanna, -----	1	2	---	140	35	25	4	8	---	35	250	---	1	7	10	11	---	2	49	80	330	
	Westmoreland, -----	1	3	4	144	66	56	4	9	70	---	337	---	1	12	23	25	8	4	70	143	500	
	Seneca, -----	1	3	---	---	---	---	---	---	---	---	---	---	1	---	3	---	---	---	11	15	15	15
	Lawrence Washery, -----	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	Totals, -----	7	18	8	958	449	294	24	42	137	180	2,087	---	6	64	93	92	28	16	395	695	2,782	
	Temple Iron Co.	Harry E., -----	1	1	4	254	203	87	46	9	17	73	695	---	1	12	19	42	14	2	76	166	861
		Forty Fort, -----	1	2	4	367	127	66	27	7	31	61	693	---	1	14	10	43	11	2	59	143	836
Mount Lookout, -----		2	1	4	339	151	44	25	14	49	97	726	---	1	12	23	19	9	3	83	150	876	
Totals, -----		4	4	12	960	481	197	98	30	97	231	2,114	---	3	38	52	104	37	7	218	459	2,573	
Kingston Coal Co.		Kingston No. 4, -----	2	2	6	496	290	171	23	13	10	93	1,021	---	1	22	31	55	39	4	171	323	1,344

Table 3.—Continued

Names of Operators and Collieries	County	Inside										Outside										Grand total inside and outside
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Doorboys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Foremen	Blacksmiths and carpenters	Engineers and firemen	State pickers (Boys)	State pickers (men)	Bookkeepers and clerks	All other employes	Total outside	
Clear Spring Coal Co. Clear Spring, Clear Spring Washery,	Luzerne,	1	2	5	215	146	50	27	6	35	65	552	1	1	4	17	75	---	5	73	176	728
		1	2	5	215	146	50	27	6	35	65	552	1	1	4	18	78	---	5	15	20	20
Totals,																						748
Peoples Bank of Wilkes- Barre, Receivers Black Diamond,	Luzerne,	1	1	8	70	65	32	10	5	79	25	296	---	1	6	19	24	12	2	62	126	422
		1	1	2	119	75	46	4	4	12	13	277	1	1	7	14	30	1	3	63	120	397
Stevens Coal Co.	Luzerne,	1	2	3	67	45	61	11	8	89	7	294	1	1	10	13	45	11	4	42	127	421
East Boston Coal Co. East Boston,	Luzerne,	1	3	1	146	48	36	13	3	12	23	286	---	1	9	23	55	6	2	49	145	431
Louise, Delaware, Lackawanna and Western Railroad Co. Pettebone,	Luzerne,	1	---	2	36	38	8	5	2	4	49	145	---	1	4	15	9	---	1	26	56	301

Dunn Coal Co. Mountain Top, -----	1	10	20	4	36	1	1	5	1	18	26	62					
Troy Coal Co. Troy, -----	1	16	6	5	35	1	2	6	1	5	24	59					
Grand totals, -----	21	47	3,063	870	220	116	484	686	7,143	4	18	167	283	46	1,138	2,297	9,440

Delaware, Lackawanna and Western Railroad Co. Pettibone, -----	8	3	5	5	6	7	5	8	5	5	5	5	57
Mountain Top, ----- Dunn Coal Co.	24	21	11	26	21	18	14	11	22	21	20	230	
Troy, ----- Troy Coal Co.	19	8										16	43

TABLE 4.—Fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Mine	County	Nature and Cause of Accident in Brief
Jan. 14	Charles Feterhovich,--	Polish, ---	Miner, ---	38	M. 1	4	Exeter, ---	Exeter, ---	Luzerne, ---	Instantly killed by fall of top rock in the face of his chamber, Babylon vein.
17	Stanley Sincavage, --	Polish, ---	Miner, ---	30	M. 1	2	Mount Lookout, ---	Mount Lookout, ---	Luzerne, ---	Fatally burned by an explosion of powder while making a cartridge.
20	Peter Shusta, -----	Polish, ---	Miner, ---	38	M. 1	---	Kingston No. 4, ---	Kingston No. 4, ---	Luzerne, ---	Fatally injured by a fall of top coal in cross-cut, Ross vein.
30	Domnick Bronsburg,--	Polish, ---	Driver, ---	18	S. ---	---	Harry E., -----	Harry E., -----	Luzerne, ---	Instantly killed by fall of rock in Lift 26, Red Ash vein. While walking out on the gangway a piece of roof fell and crushed his skull.
Feb. 25	Serina Lacassidy, ---	Italian, ---	Miner, ---	26	S. ---	---	Westmoreland, ---	Westmoreland, ---	Luzerne, ---	Fatally injured by being squeezed between cars and rib in No. 1 tunnel.
25	Barrie Orestie, ---	Italian, ---	Miner, ---	29	S. ---	---	Exeter, ---	Exeter, ---	Luzerne, ---	Instantly killed by premature blast in face of his chamber, Babylon vein.
Mar. 2	Mike Seminovich, ---	Lithuanian, ---	Miner, ---	29	S. ---	---	Exeter, ---	Exeter, ---	Luzerne, ---	Instantly killed in Marcy vein, No. 5 slope. He came in contact with an electric trolley wire.
3	William Daley, ---	Polish, ---	Motor runner, ---	21	S. ---	---	Mount Lookout, ---	Mount Lookout, ---	Luzerne, ---	Instantly killed by fall of rock in No. 3 slope. Two cars broke loose while they were being hoisted on the slope.
6	Domnick Savage, ---	Polish, ---	Comp. man., ---	55	M. 1	4	Kingston No. 1, ---	Kingston No. 1, ---	Luzerne, ---	Instantly killed by fall of rock in face of his chamber, Marcy vein.
9	George Gusher, ---	Slavonian, ---	Laborer, ---	37	S. ---	---	Forty Fort, ---	Forty Fort, ---	Luzerne, ---	Instantly killed by fall of rock in face of his chamber, on Road 7, Six Foot vein.
16	Simon Kusgolis, ---	Polish, ---	Miner, ---	27	M. 1	1	Stevens, ---	Stevens, ---	Luzerne, ---	Fatally injured by fall of rock in face of his chamber, Marcy vein.
24	Gusippe Bolsofo, ---	Italian, ---	Miner, ---	42	M. 1	---	Clear Spring, ---	Clear Spring, ---	Luzerne, ---	Ribs broken and injured internally by fall of rock in face of his chamber, Marcy vein.
28	Frank Kowatich, ---	Austrian, ---	Laborer, ---	39	M. 1	3	Black Diamond, ---	Black Diamond, ---	Luzerne, ---	Instantly killed by fall of coal in the face of his chamber, Ross vein.

April	4	Mike Zokowski,	Polish,	Miner,	25	S.	Maltby,	Instantly killed by fall of rock in the face of Road 34, Eleven Foot vein.
	7	Stephen Hishock,	Polish,	Laborer,	21	S.	Westmoreland,	Fatally injured by fall of rock in face of gangway, Pittston vein.
	17	August Savodinis,	Lithuanian,	Miner,	40	M.	Pettebone,	Fatally injured by premature blast in the face of his chamber, Hillman No. 1 vein.
	25	Benny Lukesavage,	Lithuanian,	Laborer,	31	M.	Mount Lookout,	Found dead in sump at bottom of No. 1 shaft. It is supposed that he fell down the shaft.
May	9	William Axton,	Russian,	Miner,	32	M.	Black Diamond,	Instantly killed by fall of top rock in the face of his chamber, Cooper vein.
	12	Peter Orlanda,	Italian,	Laborer,	34	M.	Mount Lookout,	Fatally burned by an explosion of gas in the face of South gangway, Red Ash vein. Died at Pittston Hospital May 16.
	12	John McNulty,	American,	Track-layer,	35	S.	Mount Lookout,	Instantly killed by an explosion of gas in the face of South gangway, Red Ash vein.
	12	Joseph Yareucz,	Polish,	Miner,	26	M.	Mount Lookout,	Instantly killed by an explosion of gas in the face of South gangway, Red Ash vein.
	12	Nicholas Nocola,	Italian,	Miner,	28	M.	Mount Lookout,	Instantly killed by an explosion of gas in the face of South gangway, Red Ash vein.
	12	Joseph Bedriskie,	Polish,	Miner,	35	M.	Mount Lookout,	Fatally injured by an explosion of gas in the face of South gangway, Red Ash vein. Died May 15, at Pittston Hospital.
	12	William Dombroskie,	Polish,	Miner,	30	M.	Mount Lookout,	Fatally injured by an explosion of gas in the face of South gangway, Red Ash vein. Died May 15.
	12	Joseph Bastallo,	Italian,	Miner,	26	S.	Mount Lookout,	Fatally injured by an explosion of gas in the face of South gangway, Red Ash vein. Died May 15.
	12	Joseph Deseria,	Italian,	Laborer,	30	M.	Mount Lookout,	Fatally injured by an explosion of gas in the face of South gangway, Red Ash vein. Died May 15.
	12	George Metcalf,	English,	Timberman,	40	M.	Mount Lookout,	Instantly killed by an explosion of gas in face of South gangway, Red Ash vein.
	12	Arthur Smallcomb,	American,	Timberman,	28	M.	Mount Lookout,	Instantly killed by an explosion of gas in the face of South gangway, Red Ash vein.
	12	Frank Smith,	Polish,	Tracklayer,	25	S.	Mount Lookout,	Instantly killed by an explosion of gas in the face of South gangway, Red Ash vein.
	12	Louise Petrasgoriskie,	Polish,	Miner,	35	M.	Mount Lookout,	Instantly killed by an explosion of gas in the face of South gangway, Red Ash vein.

Luzerne, -----

TABLE 4.—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Mine	County	Nature and Cause of Accident in Brief
May 18	Adolph Casserie, ----	Italian, ----	Miner, ----	35	M.	1	1	Stevens, ----		Instantly killed by fall of rock in the face of his chamber, Marcy vein.
June 1	Anthony W. Panella, --	Russian, ---	Slatepicker, -	20	S.	---	---	Kingston No. 4, --		Instantly killed by falling into the bony scraper line outside of breaker.
9	John Jurins, ----	Polish, ----	Footman, ---	22	S.	---	---	Clear Spring, ----		Fatally burned. An oil can exploded while filling his lamp.
19	Simon Domino, ----	Lithuanian, --	Driver, ----	17	S.	---	---	Clear Spring, ----		Killed by falling under a car in the Marcy vein while driving in the gangway road. He slipped on the rail and fell under the car.
July 2	Roman Szciski, ----	Polish, ----	Laborer, ----	35	M.	1	3	Black Diamond, --		Instantly killed by fall of rock in the face of his chamber, Red Ash vein.
Aug. 21	Peter Giden, ----	Russian, ---	Miner, ----	38	M.	1	1	Exeter, ----		Fatally injured by premature blast in face of his chamber, Checker vein.
25	Peter Vortsky, ----	Polish, ----	Laborer, ----	25	M.	1	---	Black Diamond, --	Luzerne, ----	Fatally injured by fall of coal in face of his chamber in Sump lift, Red Ash vein.
Sept. 4	Joseph Leonoski, ----	Polish, ----	Miner, ----	39	M.	1	3	Kingston No. 4, --		Instantly killed by fall of top rock in face of his chamber, Red Ash vein.
14	John Yancoskie, ----	Lithuanian, --	Miner, ----	49	M.	1	3	Mount Lookout, --		Fatally injured by fall of top rock in face of his chamber, Marcy vein.
26	August Giacconelli, --	Italian, ----	Miner, ----	44	M.	1	3	Clear Spring, ----		Instantly killed by fall of coal in face of his chamber, No. 4 lift, Marcy vein.
Oct. 8	Martin Wozniak, ----	Polish, ----	Miner, ----	28	S.	---	---	Westmoreland, --		Instantly killed by premature blast in face of his chamber, Marcy vein.
16	Paul Dobre, ----	Russian, ---	Miner, ----	24	S.	---	---	Clear Spring, ----		Instantly killed by premature blast in face of his chamber, Marcy vein, No. 5 West gangway.
Nov. 12	Andrew Pnollkawage, --	Polish, ----	Laborer, ----	30	M.	1	1	Kingston No. 1, --		Fatally injured by fall of top rock in face of his chamber, Orchard vein.

Nov. 16	Simon Mulzeski, -----	Lithuanian, -----	Runner, -----	19 S. -----	Kingston No. 4, --	Instantly killed. Run over by a trip of two cars in No. 5 lift, Red Ash vein.
23	Stanley Karuski, -----	Slavonian, -----	Laborer, -----	19 S. -----	Black Diamond, --	Fatally burned by gas in the 4th lift, Ross vein. Died at Wilkes-Barre City hospital November 30.
25	John Smith, -----	Hungarian, -----	Loader, -----	31 S. -----	Westmoreland, ---	Fatally injured by ears running over both legs on the turnout near the breaker. Outside.
25	Frank Ryan, -----	Irish, -----	Slatepicker, --	17 S. -----	Pettebone, -----	Instantly killed by being caught in the picker belt in the breaker. Outside.
Dec. 3	Thomas Rodoph, -----	Polish, -----	Miner, -----	35 M. 1 3	Harry E., -----	Fatally injured by a blast in the face of his chamber, Red Ash vein.
7	Cragie Sautho, -----	American, -----	Driver, -----	17 S. -----	Seneca, -----	Instantly killed by falling under loaded ear in the Columbia section, Clark vein.
11	Joseph Grtzer, -----	Slavonian, -----	Laborer, -----	23 S. -----	Eseler, -----	Instantly killed by a fall of rock in face of his working place, Cheequer vein.
11	Mike Ruska, -----	Slavonian, -----	Laborer, -----	21 M. 1	Eseler, -----	Instantly killed by fall of rock in face of his working place, Cheequer vein.
11	George Cornoek, -----	Polish, -----	Laborer, -----	44 M. 1 2	Seneca, -----	Fatally injured by fall of rock in face of his working place in the Clark vein, Columbia section.
15	Paul Nesterovich, -----	Slavonian, -----	Laborer, -----	33 S. -----	Harry E., -----	Instantly killed by fall of rock in face of his working place, Red Ash vein.

Luzerne, -----

TABLE 5.—Non-fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Mine	County	Nature and Cause of Accident in Brief
Jan. 4	Ned Panko, -----	Polish, -----	Miner, -----	40	M.	Kingston No. 1, -----	Luzerne, -----	Leg fractured by fall of rock in face of his chamber, Lance vein.
4	Andrew Ruslavage, -----	Polish, -----	Miner, -----	48	M.	William A., -----	Lackawanna, -----	Head cut, back bruised and wrist fractured by fall of rock in Red Ash vein.
9	Joe Meverouskie, -----	Polish, -----	Miner, -----	24	S.	Stevens, -----	Luzerne, -----	Fracture of the right leg and foot crushed by premature blast in face of his chamber.
9	William Lee, -----	American, -----	Pump-runner, -----	31	M.	Seneca, -----	Luzerne, -----	Face and hands slightly burned by gas.
13	John Walko, -----	Slavonian, -----	Laborer, -----	34	M.	Kingston No. 4, -----	Luzerne, -----	Hands and face burned by gas in West No. 2 Ross gangway.
17	Alex Shanoski, -----	Polish, -----	Laborer, -----	45	M.	Black Diamond, -----	Luzerne, -----	Right leg fractured by fall of top coal in face of his chamber, Ross vein.
22	Harry Stench, -----	American, -----	Dock boss, -----	58	M.	Exeter, -----	Luzerne, -----	Jaw fractured. Bar struck him while dumping a car on the breaker. Outside.
23	Paul Vucich, -----	Austrian, -----	Driver, -----	27	M.	East Boston, -----	Luzerne, -----	Face and nose badly bruised. Kicked by a mule.
Feb. 5	John Brehu, -----	Polish, -----	Slatepicker, -----	15	S.	Forty Fort, -----	Luzerne, -----	Arms broken. Fell in the breaker while playing with other boys. Outside.
15	John Russell, -----	American, -----	Doortender, -----	16	S.	East Boston, -----	Luzerne, -----	Arm broken. Caught between ear and props in Lance vein.
19	John Crane, -----	Irish, -----	Carpenter, -----	33	M.	William A., -----	Lackawanna, -----	Two ribs broken. Fell from scaffold. Outside.
25	Joseph Kirsinsky, -----	Polish, -----	Miner, -----	40	M.	Forty Fort, -----	Luzerne, -----	Leg broken by fall of rock in face of his chamber in South slope.
26	Stanley Brusock, -----	Lithuanian, -----	Laborer, -----	35	M.	Louise, -----	Luzerne, -----	Hands and face burned by ashes from boiler room chute. Outside.
26	Mike Mucoteh, -----	Russian, -----	Laborer, -----	32	M.	Kingston No. 4, -----	Luzerne, -----	Left leg cut off below the knee and badly bruised. Car ran over him near the breaker. Outside.

Mar. 3	John Switch, -----	Austrian, --	Laborer, --	25	M. Black Diamond, -----	Luzerne, -----	Left leg so seriously injured by fall of rock in face of his chamber that it had to be amputated.
10	Joseph Varacowski, --	Polish, ----	Doortender, ----	17	S. Kingston No. 4, -----	Luzerne, -----	Shoulder dislocated. Squeezed by cars in No. 1 West gangway, Ross vein.
18	George Nickelson, ----	American, --	Runner, ----	19	S. Exeter, -----	Luzerne, -----	Squeezed about the body. Thrown against the rib by car in Red Ash vein.
20	John Posnoek, -----	Polish, ----	Doortender, ----	17	S. Kingston No. 1, -----	Luzerne, -----	Leg broken and head cut. Car ran against him in Bennet vein.
21	Joseph Voltento, ----	Polish, ----	Laborer, ----	26	M. Kingston No. 1, -----	Luzerne, -----	Face and hands burned by gas in face of his chamber, Orchard vein.
April 11	Steve Caturic, -----	Austrian, --	Miner, ----	45	M. East Boston, -----	Luzerne, -----	Hands and neck burned by an explosion of gas in his chamber, Ross vein.
18	John Banovitch, ----	Polish, ----	Laborer, ----	28	S. Pettebone, -----	Luzerne, -----	Leg and face bruised. Car ran over him near the breaker. Outside.
21	Mike Svateosky, ----	Polish, ----	Miner, ----	27	M. Lawrence, -----	Luzerne, -----	Leg and rib fractured by fall of coal in face of his chamber.
22	Steve Marcavage, ----	Austrian, --	Laborer, --	24	S. Black Diamond, -----	Luzerne, -----	Head badly bruised by a prop. Squeezed between prop and roof.
24	John Haidlick, -----	Slavonian, --	Doortender, ----	16	S. Harry E., -----	Luzerne, -----	Hands, face and body burned by an explosion of gas in Road 32, Red Ash vein.
May 4	Mick Pushcar, -----	Polish, ----	Runner, ----	20	S. Mount Lookout, -----	Luzerne, -----	Leg broken by car jumping the track in Ross vein, West gangway.
8	Brono Chairaco, ----	Italian, ----	Miner, ----	42	M. Mount Lookout, -----	Luzerne, -----	Burned by an explosion of gas in face of his breast, Ross vein.
8	Mike Novich, -----	Polish, ----	Miner, ----	37	S. Mount Lookout, -----	Luzerne, -----	Burned by an explosion of gas in face of his breast, Ross vein.
11	Reese Thomas, -----	Welsh, ----	Engineer, ----	31	M. Pettebone, -----	Luzerne, -----	Knee bruised and fractured. Caught between cars at foot of Red Ash shaft.
12	Harry Lark, -----	American, --	Roekman, ----	24	S. -----	-----	-----
12	John Walsh, -----	American, --	Pumpman, ----	29	M. -----	-----	-----
12	Charles Babcock, ----	American, --	Braticeman, ----	54	M. -----	-----	-----
12	Alex Petrasouskie, --	Polish, ----	Laborer, ----	20	S. -----	-----	-----
12	Charles Petrosouskie, --	Polish, ----	Laborer, ----	27	M. -----	-----	-----
12	Joseph Eothsis, ----	Polish, ----	Miner, ----	28	S. -----	-----	-----
12	Alex Opineck, -----	Polish, ----	Miner, ----	30	S. Mount Lookout, -----	Luzerne, -----	Burned by an explosion of gas in South gangway, Red Ash vein.
12	John Komer, -----	Polish, ----	Laborer, ----	30	M. -----	-----	-----
12	Frank Kommer, -----	Polish, ----	Laborer, ----	49	M. -----	-----	-----
12	Patrick O'Boyle, -----	American, --	Roekman, ----	32	M. -----	-----	-----
12	William Costello, -----	American, --	Timberman, ----	39	M. -----	-----	-----
13	Anthony Paulikans, ----	Polish, ----	Siatepcker, ----	16	S. William A., -----	Lackawanna, -----	Hand bruised and sprained by machinery. Outside.
13	John Harmon, -----	Irish, ----	Laborer, ----	32	S. William A., -----	Lackawanna, -----	Leg seriously lacerated by cars near the breaker. Outside.
21	Anthony Patro, -----	Slavonian, --	Miner, ----	37	M. Forty Fort, -----	Luzerne, -----	Face and hands burned by powder near face of his chamber, Eleven Foot vein.
23	John B. Tyrolle, ----	Italian, ----	Laborer, ----	35	M. William A., -----	Lackawanna, -----	Compound fracture of left leg. Burned by cars at foot of breaker plane. Outside.

TABLE 5 . . . Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Mine	County	Nature and Cause of Accident in Brief
June 10	John Infield, -----	American,-----	Miner, -----	42	M.	Malby, -----	Luzerne, -----	Collar bone broken and left leg bruised by fall of rock in face of chamber, Red Ash vein.
13	Peter Hopkins, -----	American,-----	Miner, -----	53	M.	Westmoreland, -----	Luzerne, -----	Face and hands burned by powder. While filling a cartridge a spark from his lamp fell into the keg of powder.
17	Adam Mossin, -----	Polish, -----	Miner, -----	25	S.	Seneca, -----	Luzerne, -----	Injured about the body by flying pieces of coal from a blast in his chamber, Marey vein.
18	Steve Salopskie, -----	Polish, -----	Miner, -----	38	M.	Harry E., -----	Luzerne, -----	Hands and face burned by powder while filling a cartridge at his box in his chamber.
18	Steve Bousavage, -----	Polish, -----	Miner, -----	49	S.	Harry E., -----	Luzerne, -----	Hands and face slightly burned by powder. He was sitting on the box close to where Steve Salopskie was filling the cartridge.
19	Evan Havard, -----	American,-----	Runner, -----	29	S.	Exeter, -----	Luzerne, -----	Left leg broken. Squeezed between ear and motor in Red Ash vein.
19	Anthony Dubell, -----	Polish, -----	Miner, -----	38	M.	Kingston No. 4, -----	Luzerne, -----	Hip dislocated by fall of rock in face of his chamber, Red Ash vein.
20	Benjamin Wibber, ---	Wash, -----	Miner, -----	32	M.	Kingston No. 4, -----	Luzerne, -----	Small bone in arm broken by falling down in face of his chamber, Ross vein.
22	John Morris, -----	Wash, -----	Miner, -----	32	M.	Kingston No. 1, -----	Luzerne, -----	Miner's needle ran through his foot. He laid the needle down carelessly and in running away from a shot struck his foot against it.
July 1	Joseph Doran, -----	American,-----	Patcher, -----	20	S.	Exeter, -----	Luzerne, -----	Punctured wound in right side of his body. Spike bar fell on him. Outside.
7	William Mac, -----	American,-----	Runner, -----	30	M.	Monk Lookout, -----	Luzerne, -----	Left leg broken above knee by ear that he was helping to lift on the track in Marey vein.

July 14	Charles Cooper, -----	American,-----	Head-tender, -----	23	S. Seneca, -----	Luzerne, -----	Left leg broken. Car jumped the track and struck him above the ankle.
Aug. 14	Mike Cokcarskie, ---	Polish, -----	Miner, -----	36	M. Stevens, -----	Luzerne, -----	Collar bone broken by a car jumping the track in face of his chamber in Five Foot vein.
17	Oley Morgavage, ----	Lithuanian,-----	Driver, -----	18	S. Kingston No. 1, -----	Luzerne, -----	Two fingers taken off by ears jumping the track in Orchard vein.
21	John Green, -----	Irish, -----	Watchman, -----	51	M. Forty Fort, -----	Luzerne, -----	Leg broken. He made a misstep while making his rounds in the breaker. Outside.
24	John Slocora, -----	Lithuanian,-----	Laborer, -----	28	S. Kingston No. 1, -----	Luzerne, -----	Side injured by a rope slipping off the pot pulley on the turn-out.
25	Paul Kavich, -----	Polish, -----	Miner, -----	33	S. Westmoreland, -----	Luzerne, -----	Leg broken by a fall of rock in face of his chamber in the Eleven Foot vein.
Sept. 4	John Bartilla, -----	Polish, -----	Miner, -----	46	M. Harry E., -----	Luzerne, -----	Compound fracture of the left side and leg, caused by a fall of slate in face of his chamber. Road 19, Ross vein.
4	Peter Brower, -----	Polish, -----	Laborer, -----	32	M. Kingston No. 4, -----	Luzerne, -----	Back and head injured by fall of coal in face of his chamber, No. 2 slope, Red Ash vein.
11	Alexander Bobuer, ---	Lithuanian,-----	Driver, -----	21	S. Kingston No. 1, -----	Luzerne, -----	Leg and hips squeezed by ears in Lancee vein.
19	Jacob Karsyish, -----	Polish, -----	Miner, -----	30	S. Harry E., -----	Luzerne, -----	Side of head and face bruised by falling coal from a blast in his chamber, Eleven Foot vein.
22	Peter Zesler, -----	Austrian,-----	Doortender, -----	16	S. East Boston, -----	Luzerne, -----	Collar bone broken by falling off ear in main gangway, Lancee vein.
25	John Grudeski, -----	Russian, -----	Miner, -----	40	M. Mount Lookout, -----	Luzerne, -----	Hands badly smashed by premature blast in face of his chamber, in Boston Ross vein.
Oct. 6	Michael Reinleb, -----	Polish, -----	Driver, -----	18	S. Maltby, -----	Luzerne, -----	Cut about the head. Came in contact with the roof while riding on a mule, back in the gangway.
7	Daniel Bassett, -----	Irish, -----	Laborer, -----	18	S. Forty Fort, -----	Luzerne, -----	Muscles of right leg torn. Caught between ears outside near the Breaker.
8	Joe Vetouovity, -----	American,-----	Runner, -----	29	S. Maltby, -----	Luzerne, -----	Left leg badly lacerated. Caught between rail and ears in Marcy vein.
13	Joseph Witchevich, --	Lithuanian,-----	Driver, -----	19	S. Seneca, -----	Luzerne, -----	Arm and head cut. Squeezed between ear and rib.
14	Tracey Armstrong, ---	English,-----	Slatepicker, -----	17	S. Stevens, -----	Luzerne, -----	Back badly injured by falling from one floor to another in the breaker, a distance of 16 feet. Outside.
26	John Baron, -----	Polish, -----	Miner, -----	38	M. East Boston, -----	Luzerne, -----	Back and hips bruised by fall of top rock in face of his chamber in Marcy vein.
27	Charles Lasko, -----	Slavonian,-----	Miner, -----	31	M. Maltby, -----	Luzerne, -----	Left leg broken above the knee by fall of top rock in the face of his chamber in Marcy vein.

TABLE 5. - Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Mine	County	Nature and Cause of Accident in Brief
Oct. 31	William Russ, -----	German, ---	Slatepicker, -----	14	S.	Stevens, -----	Luzerne, -----	Leg broken. Bumped off railroad car where he was picking condemned coal. Outside.
31	George Chestnut, -----	American, ---	Slatepicker, -----	16	S.	Mount Lookout, -----	Luzerne, -----	Arm broken. Caught in jig belt in breaker. Outside.
Nov. 5	Peter Markaliner, -----	Lithuanian, ---	Miner, -----	38	M.	Exeter, -----	Luzerne, -----	Burned by gas in the Babylon vein through the carelessness of a miner.
5	John D. Touzunas, -----	Lithuanian, ---	Miner, -----	25	S.	Exeter, -----	Luzerne, -----	Burned by gas in the Babylon vein.
16	Joseph Matfus, -----	Lithuanian, ---	Miner, -----	38	M.	Stevens, -----	Luzerne, -----	Scalp wounded and right ear badly cut by flying pieces from a blast in his chamber, Five Foot vein.
23	Anthony Wheichofski, -----	Polish, ---	Miner, -----	30	M.	Black Diamond, -----	Luzerne, -----	Face and hands burned by an explosion of gas in Fourth lift, Ross vein.
27	James Teal, -----	American, ---	Driver, -----	18	S.	East Boston, -----	Luzerne, -----	Arms broken and body bruised. Squeezed between cars and rib in Eleven Foot vein.
Dec. 3	Frank Yosneskie, -----	Polish, ---	Laborer, -----	23	S.	Exeter, -----	Luzerne, -----	Head cut and left leg broken by flying pieces from a blast in face of his chamber, Babylon vein.
5	Paul Patko, -----	Polish, ---	Laborer, -----	22	S.	Mount Lookout, -----	Luzerne, -----	Arm broken. Empty car ran over it near the breaker. Outside.
7	Chris Uppinger, -----	American, ---	Runner, -----	20	S.	Louise, -----	Luzerne, -----	Head bruised by a car running against him in Bottom Ross vein.
8	John Burt, -----	American, ---	Driver, -----	19	S.	Stevens, -----	Luzerne, -----	Leg broken by car jumping track and swinging over on his leg in No. 1 Red Ash vein.
9	Andrew Wincoskie, -----	Polish, ---	Miner, -----	39	S.	Maltby, -----	Luzerne, -----	Seriously cut about the body and face by flying pieces from a premature blast in Baltimore vein.
10	Harry Lewis, -----	English, ---	Laborer, -----	30	M.	Black Diamond, -----	Luzerne, -----	Collar bone broken and ribs fractured by a car running over him in Bennett vein.

Dec. 11	Joseph Pudish, -----	Slavonian, -----	Slatepicker, -----	15	S. Harry E., -----	Luzerne, -----	Ankle cut. Came in contact with belt driving elevator in the breaker. Out-side.
19	Mike Arner, -----	Lithuanian, -----	Laborer, -----	22	S. Kingst on No. 4, -----	Luzerne, -----	Foot cut and bruised by rock falling on him in face of his chamber, Ross vein.
21	Stanley Rittic, -----	Polish, -----	Laborer, -----	30	M. Louise, -----	Luzerne, -----	Back bruised by rock falling on him in another man's chamber.
22	Joseph Shumofther, --	German, -----	Miner, -----	42	M. Louise, -----	Luzerne, -----	Arm fractured by a fall of coal in face of chamber.
22	Victor Omelian, -----	Polish, -----	Laborer, -----	43	S. Louise, -----	Luzerne, -----	Seriously injured about the body and foot badly squeezed by fall of coal in face of his chamber.
22	Zopio Pisolozzi, -----	Italian, -----	Miner, -----	46	M. Mount Lookout, -----	Luzerne, -----	Leg broken by being squeezed between car and rib.
28	Wm. Amitz, -----	American, --	Doortender, -----	16	S. East Boston, -----	Luzerne, -----	Knee bruised by being bumped by car.

MOUNT LOOKOUT EXPLOSION

The following is a brief description of the Mount Lookout accident where twelve men lost their lives and eleven others were more or less seriously injured by an explosion of gas, in the South Gangway of the Red Ash vein, on the afternoon of May 12, between three and four o'clock. My investigation shortly after the accident shows as follows: Joe Coslick, miner No. 610, working on the night shift in the South Gangway in the Red Ash vein, quit work at eleven o'clock on the night of May 11, and apparently left a feeder of gas burning in his working place. After the night shift the men were all out of the mines, the fan was stopped for twenty minutes for minor repairs. The pump runner, who is stationed near the foot of the Red Ash slope, informed the night fire boss that an explosion had occurred at about three o'clock. The fire boss upon examination found a small fire in the face of the gangway and reported it to the mine foreman, Bernard Holleran, at six-thirty on the morning of the 12th. The mine foreman immediately made an examination of the place, together with the night fire boss, and found a small fire in the face of the South Gangway of the Red Ash vein. The mine foreman immediately organized a corps of workmen and, as he supposed, extinguished the fire. He reported the fact to the district superintendent, George W. Steele, and his assistant, Gilbert Jones, who in company with the mine foreman made an examination of the place. They could not find any fire, but about thirty minutes after the examination a slight explosion occurred, followed by another still slighter explosion about thirty minutes later. Coming to the conclusion that they must have overlooked a small fire in the effected territory, they immediately organized a corps to establish the air current, which had been interfered with by these slight explosions, to remove any accumulated gas in order to enable them to reach the working face and make further investigations. About 12 o'clock the gas had been removed so that the men were enabled to reach the working face, and, while they did not find any fire, they found some ashes and considerable heat where the fire had been.

They organized a bucket brigade to carry water from a slight dip, about eighty feet from the working face, to pour on the coal that was still hot. After continuing this work for about three hours, they felt thoroughly satisfied that no further fire remained, and a large gang of men was put to work in relays building doors, block cross-cuts and opening up the cross-cut close to the face which had merely been holed through.

About three-thirty another explosion occurred that killed seven men, burned fifteen and injured one. Of the seven men killed two were burned, and five were either killed by the concussion or died from the effects of the after-damp. Of the fifteen men five were burned seriously, but the others were only slightly injured.

I ordered an inquest to be held to ascertain, if possible, if any person or persons had been negligent in any way. Dr. D. W. Dodson, the Coroner of Luzerne county, conducted the inquest and the first

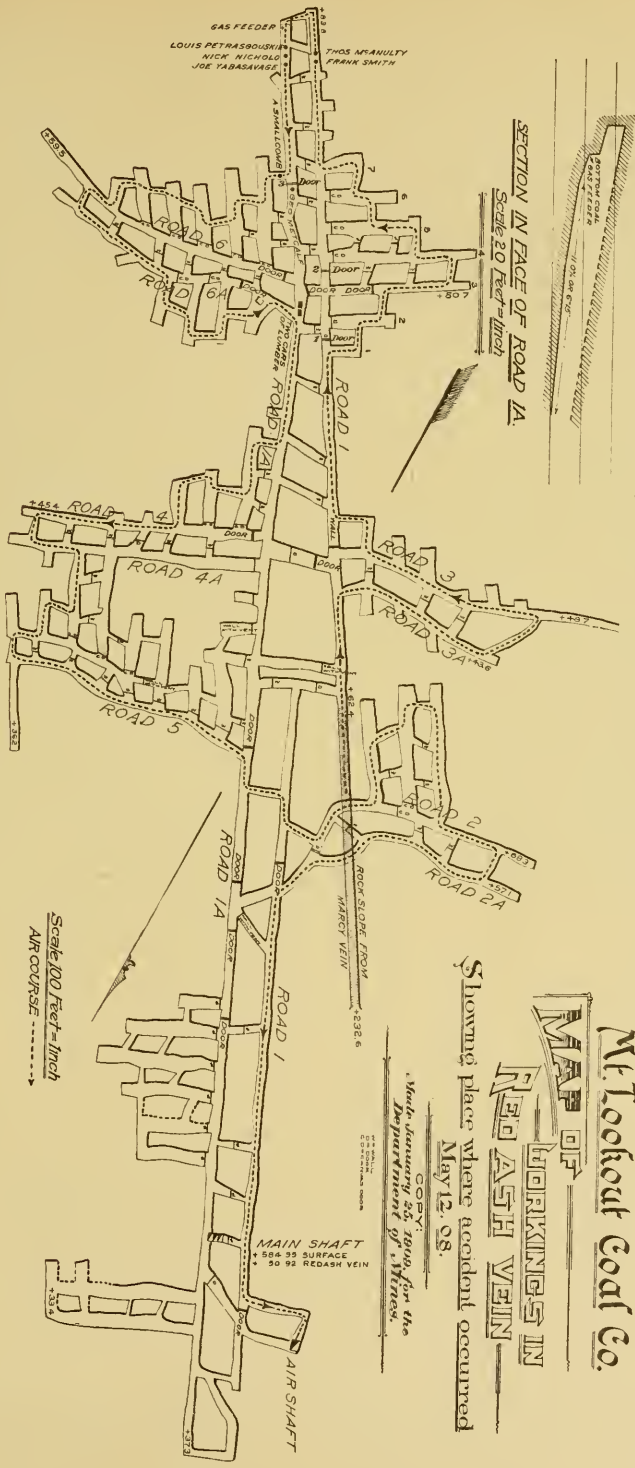
Mt. Lookout Coal Co.

MAP OF WORKINGS IN REDASH VEIN

Showing place where accident occurred
May 12, 08.

OSBY,
Mach drawing 25, 1909, for the
Department of Mines.

U.S. GEOLOGICAL SURVEY



Scale 100 Feet = Inch
Air course - - - - -

SECTION IN FACE OF ROAD 1A.
Scale 20 Feet = Inch

MAIN SHAFT
• 808 25 SURFACE
• 90 92 REDASH VEIN

GAS FEEDER
LOUIS PETRASOWSKI
NICK RICHOLD
JOE TABASAVAGE
THOS. ANAHULLY
FRANK SMITH

hearing was held on May 25, at the Town Hall in Exeter borough. After five long drawn-out hearings and the testimony of a great many witnesses, the Coroner's Jury brought in a verdict on June 5 to the effect that the officials of the Mount Lookout Colliery, namely, George W. Steele, Superintendent, Gilbert Jones, Assistant Superintendent, Bernard Holleran, Inside Foreman, and Robert Whitely, Inside Foreman, erred in their judgment in permitting so many men in the mine. The matter stood for some time pending a personal investigation prior to commencing prosecution against these officials. My attorney, the late Hon. George Troutman, was looking up the law and also the testimony in order to make out a case if possible. In the meantime the District Attorney seemed to be very active and wanted to bring the men before the Grand Jury on a charge, I presume, of criminal negligence. He tried very hard to force the Inspector of the District to become the public prosecutor, but, having failed in this, he had warrants sworn out for the arrest of the officials above mentioned, with Mr. Edward Mackin, the County Detective, as prosecutor, but before these warrants could be properly executed, the Mine Inspector through the advice of his attorney had warrants sworn out for their arrest under Article XVII, Section 1, of the Anthracite Mine Law, approved June 2, 1891, he advising that this was the proper course to pursue.

The District Attorney, however, was permitted to conduct the case by order of the Court. The information was issued on September 11, and the trial was commenced before the Hon. Henry A. Fuller, Judge of Luzerne county, October 19. The hearing lasted four days and was ably conducted by the attorneys on both sides. Judge Fuller's opinion in this case was a very able document and very impartial. This ends probably one of the most bitterly fought legal battles over a mine accident case that has ever taken place in the county. The Mount Lookout colliery is in my opinion among the best ventilated mines in my district, and to have such a terrible accident caused by an explosion of gas is something that no one familiar with the condition of the mine would ever expect.

CONDITION OF COLLIERIES

LEHIGH VALLEY COAL COMPANY

Exeter Colliery.—General condition as to safety good.

Maltby Colliery.—General condition as to safety good.

Westmoreland Colliery.—Condition as to safety good.

Seneca Colliery.—Ventilation much improved, and general condition as to safety good. Roads in poor condition.

William A. Colliery.—General condition fair.

TEMPLE IRON COMPANY

Mount Lookout Colliery.—General condition good.

Forty Fort Colliery.—Ventilation, drainage and condition as to safety good.

Harry E. Colliery.—Ventilation, drainage and condition as to safety, very good.

KINGSTON COAL COMPANY

Kingston No. 1 Shaft.—General condition as to safety good.

Kingston No. 4 Shaft.—General condition as to safety good.

CLEAR SPRING COAL COMPANY

Clear Spring Colliery.—General condition as to safety good.

STEVENS COAL COMPANY

Stevens Colliery.—General condition as to safety good.

PEOPLES BANK OF WILKES-BARRE, RECEIVERS

Black Diamond Colliery.—General condition fair.

RAUB COAL COMPANY

Louise Colliery.—Ventilation and drainage fair.

EAST BOSTON COAL COMPANY

East Boston Colliery.—General condition as to safety good.

DELAWARE, LACKAWANNA AND WESTERN RAILROAD COMPANY

Pettebone Colliery.—General condition very good.

DUNN COAL COMPANY

Mountain Top Colliery.—General condition fair.

TROY COAL COMPANY

Troy Colliery.—Ventilation good; drainage fair.

IMPROVEMENTS

LEHIGH VALLEY COAL COMPANY

Exeter Colliery.—A high pressure air-motor haulage road is being constructed in the Checker vein to increase the output. It extends from the shaft to the eastern limit of the workings.

Two planes are being driven in Marcy east to develop that part of the vein.

1,600 feet of 6 inch high pressure air pipe line was installed to connect the new high pressure air plant to the Red Ash and Checker veins.

No. 6 Plane between Red Ash and Babylon veins was equipped and is now in operation. Electric lights have been installed in barns and in all landings in both shafts.

A new 3-stage Norwalk high pressure air compressor, 600 cubic feet capacity, was installed in a brick building erected east of the boiler house. A new tower was erected over the Knight shaft. Washery walls rebuilt, jigs renewed; and washery was given a general overhauling.

Installed dust exhaust fan at breaker.

Constructed a 75,000 gallon capacity colliery emergency reservoir.

Westmoreland Colliery.—A new second opening plane had been driven for a manway from the Marcy to the Pittston vein; also a tunnel through the fault in the Pittston vein for a manway.

Electric haulage has been installed in the Marcy and Pittston veins with great success. A concrete and steel over-cast was built in Marcy vein.

Several drainage bore holes have been driven from Pittston to Marcy veins to drain water to the central pumping plant. Silting is being successfully done in the old workings of the Marcy vein.

Maltby Colliery.—Two drainage holes have been driven from Baltimore to Six Foot vein. Old cribbing in No. 1 Shaft was renewed. Steel roof supports are about to be placed at foot of No. 2 Shaft.

A new 800 gallon electric-driven pump was placed in west No. 4 lift, and main return airways have been enlarged generally through the mines.

The old Six Foot gangways are being reopened to connect with Hunt shaft workings.

Seneca Colliery.—A new pumping plant was installed in the Marcy vein at the basin. A Jeansville Duplex pump, size 28 x 12 inches, fed by steam dropped from surface through new bore hole, lifts 2,000,000 gallons of water per day through a 16 inch bore hole lined with 12 inch terra cotta pipe cemented, a height of 275 feet, to the surface, where it discharges near the west bank of the Lackawanna river and flows to the river. This improvement over numerous local pumps and drainage holes, with the main pumping station in the Bottom or Sixth vein, has proven satisfactory.

No. 6 Slope in the Bottom Marcy vein has been graded through the dividing rock and top Marcy vein, so as to connect the head with main motor road, thus reducing the haul between head of slope and the shaft 2,500 feet. This slope extends to No. 11 tunnel, driven through the main fault, and is operated by 12 x 16 inch engines with tandem drums and tail rope.

At the Sixth vein landing of the shaft a concrete arch has been built and all timbers removed. This affords ample room to work and has stopped the flow of water previously known.

No. 12 Rock Slope has been sunk from the Marcy vein to the Clark vein, which will develop the Clark vein at a lower level and west of the present Clark vein workings at Phoenix.

The Phoenix Shaft was concreted from the rock, thus replacing the old cribbing. These concrete walls were built to a height of six and one-half feet above the ground, thus replacing the wooden fence that previously enclosed the shaft and making any inflow of water impossible.

William A. Colliery.—At William A. Colliery, in the Red Ash vein, the method of pumping is being changed to handle the water while robbing the pillars at the foot of No. 3 Slope or at the southern corner of the Flag-Drake property. A Jeansville pump, size 22 x 18 x 10 inches, has been placed on the lower gangway off No. 3 Slope

about 200 feet southeast from the slope, from which the water is discharged through a new 14 inch bore hole, 150 feet deep, to the surface, where it is utilized in handling the material from the culm bank now being prepared.

The Red Ash workings east of the Lackawanna river are being silted preparatory to robbing the pillars.

At Babylon about 1,500 feet of standard gauge track have been laid and a steam shovel placed for the removal of the culm bank to the Lawrence washery for preparation.

TEMPLE IRON COMPANY

Mount Lookout Colliery.—Three 120 K. W. 250 volt direct-current generators have been installed in the electric plant to replace three 100 K. W. 500 volt generators, and the circuit in the mine changed to conform with the 250 volt current.

A new fire-proof brick boiler house, 33 x 51 feet, with steel roof and adjoining coal bin, 15 feet 2 inches x 51 feet x 17 feet deep, of reinforced concrete, has been built, and two 250 H. P. Stirling water tube boilers installed therein.

Harry E. Colliery.—A new brick boiler house, 144 feet 4 inches x 41 feet, with steel roof and adjoining coal bin of reinforced concrete, 17 feet 6 inches x 144 feet 4 inches x 20 feet deep, has been built. The five original Stirling boilers have been rebuilt and two others of 250 H. P. each added, making a plant of 1,625 H. P. at this colliery. Forced draft by blower fan, feed water regulators, fuel and ash conveyors have also been installed.

A new ventilating fan, 25 foot diameter, 8 foot face, has been erected at the No. 2 Shaft, driven by an 18 x 36 inch engine. The fan house, casing spiral and chimney are all of reinforced concrete.

KINGSTON COAL COMPANY

Kingston No. 4.—A new brick electric generator house completed, in which three 240 K. W. direct driven generators have been installed.

A new four-stage centrifugal pump placed in the Orchard vein.

One 24 x 10 x 36 Duplex pump at Orchard Level.

One new 28 x 10 x 36 Duplex pump at Bennett vein, together with new culm and steam lines for same.

One 20 x 38 x 10 x 36 Compound pump installed at Red Ash shaft discharging through a new 10 inch bore hole, 650 feet long, to the surface.

One new concrete reservoir, with a capacity of 750,000 gallons, to supply the breaker and washery.

Two 20 x 12 x 36 pumps located at the reservoir.

Brick addition to the warehouse.

One brick waiting room for the miners and safety lamp station built at the head of No. 1 Shaft.

Boring surface test holes continued throughout the year.

A new 8 x 25 foot fan in concrete casing and house finished, new fan in operation since March.

A new school for the instruction of the foreign miners and other employes of the company has been opened and has met with encouraging success. The course of lectures on mining questions has also been continued throughout the year.

DELAWARE, LACKAWANNA AND WESTERN RAILROAD COMPANY

Pettebone.—Two rock tunnels were driven from the Cooper to the Five Foot vein. One of these is to be used exclusively for ventilation.

One rock plane has been driven from Five Foot to Five Foot vein through fault.

A large concrete and steel air bridge has been erected off of the second opening tunnel from Cooper to Five Foot vein.



Ninth District

LUZERNE COUNTY

Wilkes-Barre, Pa., February 20, 1909.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor to transmit herewith my annual report as Inspector of Mines of the Ninth Anthracite District for the year ending December 31, 1908.

The report contains the statistical information required by law, a brief description of the fatal and non-fatal accidents and also a brief description of the condition of the mines.

Respectfully submitted,

D. T. DAVIS, Inspector.

SUMMARY OF STATISTICS

Number of collieries,	15
Number of mines,	26
Number of mines in operation,	26
Number of tons of coal shipped to market,	4,955,583
Number of tons used at mines for steam and heat,	408,774
Number of tons sold to local trade and used by employes,	136,232
Number of tons produced,	5,500,589
Number of tons produced by compressed air machines,	—
Number of tons produced by electrical machines,	—
Number of persons employed inside of mines,	8,326
Number of persons employed outside,	2,704
Number of fatal accidents inside of mines,	37
Number of fatal accidents outside,	5
Number of non-fatal accidents inside of mines,	88
Number of non-fatal accidents outside,	11
Number of tons of coal produced per fatal accident inside,	148,665
Number of persons employed per fatal accident inside, ..	225
Number of persons employed per fatal accident outside, ..	541
Number of persons employed per non-fatal accident inside, ..	95
Number of persons employed per non-fatal accident outside,	246
Number of wives made widows,	23
Number of children orphaned,	57
Number of steam locomotives used inside of mines,	1
Number of steam locomotives used outside,	11
Number of compressed air locomotives used inside,	3
Number of electric motors used inside,	21
Number of fans in use,	32
Number of gaseous mines in operation,	19
Number of non-gaseous mines in operation,	7
Number of old mines abandoned,	2

TABLE A

PRODUCTION OF COAL

Names of Operators	Tons
Lehigh and Wilkes-Barre Coal Company,	1,256,204
Kingston Coal Company,	1,213,901
Delaware, Lackawanna and Western Railroad Company,	1,138,232
Delaware and Hudson Company,	1,109,850
Parrish Coal Company,	474,276
Plymouth Coal Company,	188,308
George F. Lee Coal Company,	59,776
West Nanticoke Coal Company,	55,242
Bright Coal Company,	4,800
Total,	<u>5,500,589</u>

Production by Counties

Luzerne,	<u>5,500,589</u>
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TABLE B.—Fatal and non-fatal accidents inside and outside of mines; number of tons of coal produced per accident; number of persons employed; number employed per accident

Names of Operators	Fatal Accidents			Non-fatal Accidents			Tons of coal produced per fatal accident inside	Tons of coal produced per non-fatal accident inside	Number of employees inside	Number of employees outside	Total number of employees	Number of employees inside per fatal accident	Number of employees outside per fatal accident	Number of employees inside per non-fatal accident	Number of employees outside per non-fatal accident								
	Fatal Accidents		Non-fatal Accidents		Total	Tons of coal produced per fatal accident inside										Tons of coal produced per non-fatal accident inside	Number of employees inside	Number of employees outside	Total number of employees	Number of employees inside per fatal accident	Number of employees outside per fatal accident	Number of employees inside per non-fatal accident	Number of employees outside per non-fatal accident
	Inside	Outside	Inside	Outside																				Total
Lehigh and Wilkes-Barre Coal Co., ---	7	1	8	25	4	29	179,468	50,248	1,799	516	2,315	257	516	72	129								
Kingston Coal Co., -----	8	1	9	10	2	12	151,738	121,890	1,306	536	1,902	171	536	137	208								
Delaware, Lackawanna and Western Railroad Co., -----	13	1	14	19	1	20	87,556	59,907	1,905	344	2,249	147	344	100	344								
Delaware and Hudson Co., -----	4	1	5	20	3	23	277,463	55,492	1,832	675	2,513	460	675	92	225								
Farrish Coal Co., -----	1	2	3	12	1	13	474,276	39,523	969	303	1,362	969	197	81	294								
Plymouth Coal Co., -----	3	1	4	1	1	2	62,769	188,303	991	140	434	98	140	142	140								
George F. Lee Coal Co., -----	1	1	2	1	1	2	59,776	59,776	142	62	204	142	62	142	142								
Miscellaneous companies, -----	1	1	2	1	1	2	13	13	13	88	51	13	88	13	142								
Totals and averages for district, -	37	5	42	88	11	99	148,665	62,507	8,326	2,704	11,030	225	541	95	246								

TABLE C.—Classification of Fatal Accidents Inside and Outside of Mines

	Months												Totals	Percentages
	January	February	March	April	May	June	July	August	September	October	November	December		
Causes of Accidents Inside														
Falls of coal, -----		1							1		1	1	4	10.81
Falls of slate, -----	1	1	1		1								4	10.81
Falls of roof, -----		1			1		1	2	2	1	2		10	27.02
Mine cars, -----				1				1	1		1	1	4	10.81
Explosions of gas and dust, -----	3			2			1				1		7	18.92
Premature blasts, -----	1	1						1					3	8.11
Falling into shafts, -----									1	1			2	5.41
Miscellaneous, -----		1			1								2	8.11
Totals, -----	5	5	1	3	3	2	3	5	3	5	2	37	100.00	
Causes of Accidents Outside														
Cars, -----	1												1	20.00
Machinery, -----		1	1										2	40.00
Miscellaneous, -----								2					2	40.00
Totals, -----	1	1	1					2				5	100.00	
Grand totals inside and outside, -----	6	6	2	3	3	2	3	7	3	5	2	42		

TABLE D.—Classification of Non-fatal Accidents Inside and Outside of Mines

	Months												Totals	Percentages
	January	February	March	April	May	June	July	August	September	October	November	December		
Causes of Accidents Inside														
Falls of coal, -----		2	2			1					1		6	6.82
Falls of slate, -----						1	1			1	1	1	3	3.41
Falls of roof, -----	1	3			1	1		1	2		1	2	12	13.64
Mine cars, -----	2	3	3	5	3	2	2	1		4		1	26	29.54
Explosions of gas and dust, -----				5	2	1	3			1			17	19.32
Explosions of powder and dynamite, -----				2	1				1		1	1	6	6.82
Premature blasts, -----					1				1			2	4	4.54
Mules, -----								1			1		2	2.27
Miscellaneous, -----	1	1	2	4			4						12	13.64
Totals, -----	4	9	12	16	8	6	10	2	4	5	5	7	88	100.00
Causes of Accidents Outside														
Cars, -----					1							1	2	18.18
Machinery, -----	1												1	9.09
Miscellaneous, -----		1					1	2		1	3	8	8	72.73
Totals, -----	1	1			1		1	2		1	4	11	100.00	
Grand totals inside and outside, -----	5	10	12	16	9	6	11	4	4	5	6	11	99	

TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
Inside													
Miners,	3	3			2		2	3	1	2	3	1	20
Miners' laborers,	2	1	1		1				4		1		10
Drivers and runners,		1										1	2
Doorboys and helpers,				1						1			2
All other employes,				2									3
Totals,	5	5	1	3	3		2	3	5	3	5	2	37
Outside													
Blacksmiths and carpenters,	1												1
Slatepickers (boys),			1										1
All other employes,		1							2				3
Totals,	1	1	1						2				5
Grand totals inside and outside, ..	6	6	2	3	3		2	3	7	3	5	2	42

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
Inside													
Mine foremen,	1												1
Miners,	1	5	3	5	1	3	3		2		3	4	28
Miners' laborers,	1	3	5	3	4	3	1	1	1	1	1	1	24
Drivers and runners,	1		1	1			1			2	1	1	9
Doorboys and helpers,			1	2			1						4
Pumpmen,						1	1						1
Company men,			1	3	1	1				2		1	11
All other employes,		1	1	3	2		1	1	1				10
Totals,	4	9	12	16	8	6	10	2	4	5	5	7	83
Outside													
Slatepickers (boys),	1	1										1	3
All other employes,					1		1	2			1	3	8
Totals,	1	1			1		1	2			1	4	11
Grand totals inside and outside, ..	5	10	12	16	9	6	11	4	4	5	6	11	99

TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
American,	1		1	3					1	1	2		9
English,		1			1				1			1	4
Welsh,		1					1	1					3
Polish,	3	4	1		2		1	1	3	2			17
Slavonian,									1		1		2
Lithuanian,	1							1	1		1		4
Austrian,	1											1	2
Russian,											1		1
Totals,	6	6	2	3	3		2	3	7	3	5	2	42

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
American,	1	2	2	5	2	2	4	2	1	2	2	2	27
English,	1			1			1				1	2	5
Welsh,		2	2	5			1	1			1	1	14
Irish,					1							1	3
German,	1	1		1			1				1		5
Polish,	1	2	4	2	3	2		1		1		4	20
Slavonian,					1		2					1	4
Lithuanian,	1	1		1			1		1	1		1	7
Austrian,		1		1	2				1				5
Russian,		1	4			2	1		1		1		10
Totals,	5	10	12	16	9	6	11	4	4	5	6	11	99

TABLE I.—Operators and mines, kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents, and number of persons employed inside

Names of Operators and Mines	Kind of opening	Gaseous or non-gaseous	Method of ventilation	Diameter of fan in feet	Width of blades in feet	Depth of blades in feet	Number of revolutions per minute	Water range developed—in inches	Name of fan	Power used	Number of splits of air currents	Number of cubic feet of air per minute entering the mine at inlet	Total quantity of air per minute circulating in all the splits in cubic feet	Number of cubic feet per minute passing out at outlet	Number of persons employed inside
Lehigh and Wilkes-Barre Coal Co.															
Nottingham No. 15, -----	Shaft,-----	Gaseous,	Fans,-----	{ 24 24 24 24	7.10	6	78	2.1	{ Guibal, -----	Steam,	8	227,000	345,000	936	
Lance No. 11, -----	Shaft,-----	Gaseous,	Fans,-----	{ 34.3 35.0 35.0	10.11	8.5	43	2.0	{ Guibal, -----	Steam,	15	170,000	344,000	607	
Reynolds No. 16, -----	Slope,-----	Gaseous,	Fan,-----	{ 23.9 -----	5.7	5.10	75	1.0	Guibal,-----	Steam,	5	50,000	101,000	226	
Delaware, Lackawanna and Western Railroad Co.															
Woodward, -----	2 shafts -	Gaseous,	Fans,-----	{ 16 16 20	5.0	6.3	105	1.6	{ Dickson Open, ----- Dickson Closed, ----- Dickson Closed, ----- Dickson Closed, -----	Steam,	26	332,480	677,100	1,292	
Avondale, -----	Shaft,-----	Gaseous,	Fans,-----	{ 16 5 16	5	4	102	1.0	{ Dickson Open, -----	Steam,	10	148,000	178,000	612	

Delaware and Hudson Co. Boston, -----	Shaft and Drift, ----- {Shaft and Drift, ----- Shaft, ----- Shaft, ----- Shaft, -----	Gaseous, ----- {Gaseous, ----- Gaseous, ----- Gaseous, ----- Gaseous, -----	Fan, ----- Fans, ----- Fans, ----- Fan, ----- Fan, -----	22	5	6.6	59	1.5	Guibal, ----- {Guibal, ----- Guibal, ----- Guibal, ----- Guibal, -----	Steam, ----- Steam, ----- Steam, ----- Steam, -----	9	230,000	180,000	250,000	331		
				28	10	7.6	60	1.6			270,000	225,000	350,000	637			
				17	5	4	90	1.2			224,000	200,000	250,000	522			
				28	10	7.6	71	3.4			99,500	88,000	105,500	161			
				17	5	4	120	2.1			85,000	62,000	105,000	187			
22.5	5	6.6	75	1.8													
Kingston Coal Co.	{Shaft, ----- Slope, ----- Drift, ----- No. 41, Drift, ----- No. 42, Drift, ----- No. 43, Drift, ----- No. 44, Slope, -----	Gaseous, ----- Gaseous, ----- Non-gas., ----- Non-gas., ----- Non-gas., ----- Non-gas., ----- Non-gas., ----- Gaseous, -----	Fan, ----- Fan, ----- Natural, ----- Natural, ----- Natural, ----- Natural, ----- Natural, ----- Fan, -----	28	8	7.8	60	1.8	Guibal, ----- Guibal, -----	Steam, ----- Steam, -----	5	90,600	55,000	94,800			
				21	6	6.9	65	1.5			185,000	154,000	205,000				
											63,400	53,000	66,000	1,114			
Gaylord, -----	Slope, -----	Gaseous, -----	Fan, -----	25	8	7	60	1.1	Guibal, -----	Steam, -----	8	88,000	23,000	81,000	252		
				24	8.05	7.4	70	2.1			158,000	105,670	185,000	420			
				20	5.8	5.8	80	2			Guibal, ----- Auiliary, ----- Guibal, -----	Steam, ----- Steam, ----- Steam, -----	21	330,000	248,000	352,000	549
				35	11.9	10.8	48	2									
				24	8.05	7.4	70										
20	5.8	5.8	80														
Parrish Coal Co. Parrish, -----	Slope, -----	Gaseous, -----	Fans, -----	20	6.6	5.6	86	2.3	Guibal, -----	Steam, -----	7	82,250	66,000	75,000	294		
				20	6.6	5.6	86	2.3									
George F. Lee Coal Co. Chauncey, -----	{Slope, ----- Drift, -----	Non-gas., -----	Natural, -----	2							2	34,000	23,500	36,000	142		
Bright Coal Co. Hillside, -----	Slope, -----	Non-gas., -----	Steam Jet, -----	1							1	7,200	5,680	13,440	13		

TABLE 1.—Operators, location of collieries, railroads, etc.

Names of Operators and Collieries	County	Name of General Superintendent	Post Office	Name of Superintendent	Post Office	Railroad to Mine	
Lehigh and Wilkes-Barre Coal Co.							
Nottingham No. 15,	Luzerne,	C. F. Huber,	Wilkes-Barre,	Morgan R. Morgans, Inside,	Wilkes-Barre,	C. R. R. of N. J.	
Jeanee No. 11,							W. H. Herring, Outside,
Reynolds No. 16,							
Delaware, Lackawanna and Western Railroad Co.	Luzerne,	R. A. Phillips,	Scranton,	Henry G. Davis,	Kingston,	D., L. and W.	
Delaware and Hudson Co.	Luzerne,	C. C. Rose,	Scranton,	E. R. Pettebone,	Dorranecton,	Delaware and Hudson	
Boston, Plymouth Nos. 2, 3, 4 and 5,	Luzerne,	F. E. Zerby,	Wilkes-Barre,	Thomas H. Williams, Inside,	Edwardsville,	D., L. and W., Delaware and Hudson	
Kingston Coal Co.	Luzerne,	H. H. Ashley,	Wilkes-Barre,	Ralph Smith,	Wilkes-Barre,	D., L. and W., Delaware and Hudson	
Parrish, Burtonwood,	Luzerne,	James B. Davis,	Plymouth,	Thomas R. Evans,	Plymouth,	C. R. R. of N. J.	
Plymouth Coal Co.	Luzerne,	George F. Lee,	Wilkes-Barre,	Benjamin Anos,	Plymouth,	D., L. and W.	
Dodson,	Luzerne,	J. R. Dainty,	Scranton,	A. D. W. Smith,	Wilkes-Barre,	D., L. and W.	
George F. Lee Coal Co.	Luzerne,					Delaware and Hudson	
Chaunee,	Luzerne,					Pennsylvania	
Bright Coal Co.							
Hillside,							
West Nanticoke Coal Co.							
West Nanticoke Washery,							

TABLE 2.—Number of tons of coal mined, number of days worked, number of persons employed, number killed and injured, quantity of powder and dynamite used, etc.

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Number of kegs of powder used	Number of pounds of dynamite used	Number of horses and mules
Lehigh and Wilkes-Barre Coal Co.												
Nottingham No. 15, -----	Luzerne, -----	688,646	60,701	4,846	754,193	230	1,194	3	18	14,559	9,612	163
Lance No. 11, -----		439,408	30,012	2,542	471,962	231	782	4	6	14,447	44,455	100
Reynolds No. 16,* -----		26,877	3,172	-----	30,049	40	339	1	3	456	690	67
Inman No. 21,† -----		-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Totals, -----		1,154,931	93,885	7,388	1,256,204	-----	2,315	8	29	29,462	54,757	330
Kingston Coal Co												
Kingston No. 2, -----	Luzerne, -----	735,560	18,800	68,155	820,515	279	1,486	7	9	27,081	2,950	142
Gaylord, -----		169,686	13,738	8,217	188,841	230	332	2	3	5,783	4,990	56
Washeries												
Kingston No. 2, -----	Luzerne, -----	902,246	32,538	74,572	1,009,356	-----	1,888	9	12	32,864	7,940	198
Gaylord, -----		74,148	2,821	190	77,159	-----	37	-----	-----	-----	-----	-----
		169,271	-----	18,115	127,386	-----	27	-----	-----	-----	-----	-----
Totals, -----		183,419	2,821	18,305	204,545	-----	64	-----	-----	-----	-----	-----
		1,085,665	35,359	92,877	1,213,901	-----	1,902	9	12	32,864	7,940	198

*Breaker abandoned; coal prepared at Nottingham No. 15.

†Sinking shaft.

TABLE 2.—Continued

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Number of kegs of powder used	Number of pounds of dynamite used	Number of horses and mules
Delaware, Lackawanna and Western Railroad Co.	Luzerne,	755,236	59,853	5,109	800,198	231	1,542	12	17	25,735	10,389	129
Woodward,		299,378	36,410	2,246	338,034	273	707	2	3	6,460	4,123	62
Avondale,		1,054,674	76,263	7,355	1,138,292	---	2,249	14	20	32,195	20,962	191
Totals,		---	---	---	---	---	---	---	---	---	---	---
Delaware and Hudson Co.	Luzerne,	107,413	20,433	---	127,746	76	447	---	2	3,832	402	49
Boston,†		382,623	30,283	5,296	418,204	232	813	1	5	11,682	7,032	90
Plymouth No. 3,		277,646	56,316	---	314,192	217	688	2	12	9,543	2,845	75
Plymouth No. 2,*		193,370	25,960	4,564	223,894	105	197	3	3	4,825	1,438	70
Plymouth No. 4,*		960,952	113,214	9,860	1,084,026	---	2,501	4	23	29,882	11,717	284
Plymouth No. 5,		637	2,491	---	3,128	---	**	---	---	---	---	---
Washeries	Luzerne,	10,314	12,382	12	22,696	12	---	---	---	---	---	---
Plymouth No. 2,		10,951	14,873	---	25,824	---	12	---	---	---	---	---
Plymouth No. 5,		971,903	138,067	9,860	1,109,850	---	2,513	4	23	29,882	11,717	284
Totals,		---	---	---	---	---	---	---	---	---	---	---

†Breaker abandoned; coal prepared at Plymouth No. 5.

*Included with employes at Plymouth No. 2 mine.

**Coal prepared at Plymouth No. 5.

TABLE 2.—Part 2

Names of Operators	County	Number of Boilers				Locomotives			Number of steam engines of all classes	Total horse power	Number of pumps delivering water to surface	Capacity in gallons per minute	Quantity delivered to surface per minute—gallons	Number of electric dynamos	Number of air compressors
		Cylindrical	Horse power	Tubular	Horse power	Total horse power	Steam	Air								Electric
Lehigh and Wilkes-Barre Coal Co.,		6	396	24	5,290	5,686	8	3	135	8,565	5	15,660	4,000	7	
Kingston Coal Co.,				14	3,600	3,600	0	0	40	4,350	8	3,030	2,500	1	
Delaware, Lackawanna and Western Railroad Co.,				20	4,375	4,375	3	15	53	6,175	5	10,600	4,200	3	
Parrish Coal Co.,		117	3,159	13	3,175	6,334			200	13,015	9	12,200	3,650	2	6
Plymouth Coal Co.,		18	720	30	4,500	5,220			49	8,221	2	2,167	1,452	6	
George F. Lee Coal Co.,	Luzerne			17	2,600	2,600			12	1,500	3	2,100	674	1	3
West Nantioke Coal Co.,				4	400	400			4	350					
Bright Coal Co.,				3	250	250			5	200					
				2	250	250			3	110	1	800	800		
Totals,		141	4,275	128	24,440	28,715	12	3	591	42,426	29	46,647	17,366	7	23

Table 3.—Number of each class of employes inside and outside of mines

Names of Operators and Collieries	County	Inside										Outside							Grand total inside and outside			
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Doorboys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Foremen	Blacksmiths and carpenters	Engineers and firemen	State pickers (boys)	State pickers (men)		Bookkeepers and clerks	All other employes	Total outside
Lehigh and Wilkes-Barre Coal Co. Nottingham No. 15, Lance No. 11, Reynolds No. 16,*	Luzerne, -----	2	3	10	342	279	123	33	7	127	40	966	---	1	14	39	42	12	5	115	228	1,194
		1	1	7	200	182	68	46	5	88	9	607	---	1	6	23	50	17	3	75	175	782
		1	1	2	47	89	35	6	---	45	---	226	---	1	4	13	41	6	2	46	113	339
		4	5	19	589	550	226	85	12	260	49	1,799	---	3	24	75	133	35	10	236	516	2,315
Kingston Coal Co. Kingston No. 2, Gaylord, -----	Luzerne, -----	3	3	3	456	393	158	2	---	75	1,114	1	2	62	17	60	46	3	181	372	1,486	
		2	1	1	89	60	31	3	2	35	28	252	1	1	14	8	1	2	65	100	352	
		5	4	4	545	433	189	24	4	35	103	1,366	2	3	76	25	68	47	5	246	472	1,838
Washeries Kingston No. 2, Gaylord, -----	Luzerne, -----	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Totals, -----		5	4	4	545	453	189	24	4	35	1,366	2	5	84	30	68	47	6	294	536	1,902	

*Abandoned; coal prepared at Nottingham No. 15.

TABLE 3.—Part 2

Names of Operators and Collieries	County	Number of Days Worked in Breaker												Total
		January	February	March	April	May	June	July	August	September	October	November	December	
Lehigh and Wilkes-Barre Coal Co.	Luzerne,	24	19	14	22	24	17	13	13	17	21	22	24	230
Nottingham No. 15,		24	18	14	23	24	17	13	13	19	21	21	24	231
Lance No. 11,		22	18											40
Reynolds No. 16,	Luzerne,	26	25	25	24	25	26	18	18	22	22	23	25	279
Kingston No. 2,		23	22	22	22	22	24	8	2	22	25	23	24	239
Gayford,														
Kingston Coal Co.	Luzerne,	25	22	6	12	24	25	21	11	23	15	23	24	231
Delaware, Lackawanna and Western Railroad Co.		24	23	20	22	23	23	24	18	23	26	23	24	273
Woodward,														
Avondale,	Luzerne,	13	12	13	12	12	14							76
Boston,		24	22	24	22	20	20	18	17	19	23	21	22	252
Plymouth No. 3,		17	24	20	20	19	18	18	18	20	22	20	21	217
Plymouth No. 2,	Luzerne,	13	11	10	9	9		8	7	8	8	8	15	106
Plymouth No. 5,														
Delaware and Hudson Co.														
Buttonwood,	Luzerne,	24	16	14	23	24	16	12	13	17	21	15	19	214
Parrish,		23	15	13	21	22	16	13	13	19	21	18	18	212
Parrish Coal Co.														
Dodson,	Luzerne,	20	19	12	16	17	19	16	18	16	19	16	17	205
Chauncey,	Luzerne,	20	19	14	16	17	16	17	8	13	19	18	20	197
Hillside,	Luzerne,	15	16	14	3				17	22	26	26	20	159

TABLE 4.—Fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Mine	County	Nature and Cause of Accident in Brief
Jan. 2	Van P. Schovnover,--	American,--	Carpenter, --	30	M.	1	1	Kingston No. 2,--		Instantly killed. Run over by car while handling a square to his partner. The car was started out about thirty feet from where he was standing and as the man who was running the car was at the rear end he could not see Schovnover.
9	John Okit'is, -----	Lithuanian,	Miner, -----	38	M.	1	2	Dodson, -----	Luzerne, -----	Fatally injured in Red Ash vein. He was taking down the top bench of coal in a chamber that had been abandoned sometime previous to the accident, and had worked but a short distance from the gangway. The chamber contained more or less top coal its entire length and rock that had fallen during its abandonment. As he was desirous of seeing how much coal lay in the chamber he proceeded to make an examination and in doing so he encountered a small body of gas that had accumulated in a hole in the roof where a small fall had occurred sometime previous. He died at Mercy Hospital, January 12.
13	Joseph Rogoski, -----	Polish,-----	Miner, -----	45	M.	1	4	Woodward, -----	Luzerne, -----	[Fatally burned by explosion of gas at face of chamber. Died at Moses Taylor Hospital, January 26.
13	John Novokoski, -----	Polish,-----	Miner, -----	42	M.	1	8	Woodward, -----	Luzerne, -----	

TABLE 4.—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Mine	County	Nature and Cause of Accident in Brief
Jan. 22	John Koneft, -----	Austrian, ---	Laborer, ---	28	S.	-----	-----	Woodward, -----	-----	Instantly killed in No. 1 West lift, No. 2 slope, Cooper vein. The miner had drilled a hole in the rider coal from the under side pointing from the face outward. He then prepared a charge of powder and was pushing it in the drill hole with the end of a needle. His naked lamp was on the bottom and Koneft was standing directly under the hole with his lamp on his head ready to throw tamping when in some manner the cartridge burst allowing the powder to dribble along the hole. A portion of it dropped on his lamp which caused the entire charge to explode blowing the rider coal down on him. The miner was blown toward the face of the east gangway, but was uninjured.
29	Louis Kopek, -----	Polish, ---	Laborer, ---	33	S.	-----	-----	Avondale, -----	Luzerne, -----	Fatally injured in No. 8 slope airway, Red Ash vein. While he was loading a car a piece of slate fell and struck him on the head causing him to fall to the floor of the mine with considerable force. As he fell he struck some coal that he had laid to one side for topping the car and fractured his skull. The fall was caused by a slip in the roof. He died January 30.
Feb. 4	Peter Karnish, -----	Polish, ---	Miner, -----	30	S.	-----	-----	Plymouth No. 3, ---	-----	Fatally injured. He had lighted a squib and was retreating to a place of safety when the blast exploded and he was struck by the flying coal. He died within forty-five minutes.

Fatally injured in Five Foot vein. He had fired a blast and was working out the remainder of a shot that had failed to cut when a piece of rock fell on him. He died at the City Hospital, February 5.

Fatally injured in East Cooper vein while robbing pillars. He had fired a shot and went to the face shortly afterward, and while he was barring out the bottom bench of coal a piece of top coal fell on him. He died at the City Hospital shortly afterward.

Instantly killed. He had been told by the breaker boss to throw fine dirt into the conveyor line and to clean the platform. For some reason or other he left his work and went to the other end of the horizontal scraper line, a distance of two hundred and thirty-six feet, where it emptied its contents into the pit of the conveyor line that carried dirt and other debris to the bank. No one saw him and no one had told him to go to the end of this line. It is supposed that he was standing directly over the elevator pit, shoveling dirt, when he fell into the scraper line in the vicinity of the sprocket wheel and was caught in the machinery which dragged him about one hundred and eighty feet where he was found by two workmen.

Fatally injured in No. 2 slope, Red Ash vein. He had been sent by his miner to the corner of the cross-cut for a needle and while there he was struck by a piece of slate that fell from a slip in the roof. He was taken to the Moses Taylor Hospital where he died the next day.

Instantly killed in No. 9 East gangway, Red Ash vein. He was driving a team of mules in this section. He was going out the gangway with a loaded trip of cats and was near breast No. 28 when the high pressure air line broke and the pressure of air blowing around striking him on the right side of the head fracturing his skull.

Feb. 4	Charles Ogdan, -----	Polish, -----	Miner, -----	40	M. 1	4	Lance No. 11, ---
4	Thomas Williams, -----	Welsh, -----	Miner, -----	47	M. 1	1	Gaylord, -----
8	John Mazur, -----	Polish, -----	Breaker cleaner, -----	19	S. -----	-----	Woodward, -----
10	Adam Smith, -----	Polish, -----	Laborer, -----	32	M. 1	4	Avondale, -----
12	John Hodgkin, -----	English, -----	Driver, -----	20	S. -----	-----	Nottingham No. 15, -----

Luzerne, -----

TABLE 4.—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Mine	County	Nature and Cause of Accident in Brief
Mar. 6	Isadore Sucaean, ----	Polish, ----	Laborer, ----	21	S.	----	----	Kingston No. 2,--	-----	Instantly killed by fall of slate while loading a car on West gangway, Red Ash vein. The foreman in company with a miner had examined the place in the morning and had pronounced it unsafe. He then instructed the miner to drill a hole in the dangerous roof and see that the place was made safe. The miner failed to obey orders, but claimed that he did try to bar it down and fall it. Sucaean was alone in the chamber when the accident occurred.
10	Joseph Scrobala, ----	American,--	Slatepicker,--	16	S.	----	----	Buttonwood,--	-----	Instantly killed. His body was found twenty-five feet from the Emory picker, of which he was in charge, partly wound around a shaft, his arm being pulled out of the socket. It is not known why he climbed up to the place, which was about ten feet above his head, unless it was to play. He liked to get in a remote corner to throw dirt down on the other boys.
April 18	Verned Harvey, -----	American,--	Rockman, ---	28	S.	----	----	Woodward, ----	-----	Fatally injured by explosion of gas at face of tunnel. Died at Moses Taylor Hospital, May 4.
18	Frank Sullivan, -----	American,--	Rockman, ---	30	M.	1	----	Woodward, ----	-----	Fatally injured by explosion of gas at face of tunnel. Died April 27.

April 21	Frank Handlos, -----	American, ---	Doorboy, ---	17	S. -----	Plymouth No. 2,	Fatally injured on No. 7 plane, No. 4 East gangway, G vein. A driver was taking a trip of loaded cars and an empty car out of the gangway, and as he was passing through a door Handlos tried to jump on the trip between the cars, but slipped and fell under the empty car. He died at his home the same day.
May 9	Stephen Yoncofski, ---	Polish, ---	Laborer, ---	35	M. 1 3	Chauncey, -----	Fatally injured in No. 2 slope, Red Ash vein. He was loading a car when some coal and rock began to slide down an old place just a few yards outside of where he was working. The miner, realizing the situation, told him to stay in the face, but he did not heed the warning and as he rushed out he was caught by the fall. He died the next day.
13	John Pritosky, -----	Polish, ---	Miner, ---	27	M. 1 2	Lance No. 11, ----	Fatally injured in No. 3 slope, Ross vein. He had fired a blast and was working out the balance of the shot when a piece of middle rock fell on him, fracturing his spine. He was taken to the City Hospital where he died June 2.
22	Dawson Weatherhog, ---	English, ---	Miner, ---	60	M. 1	Woodward, -----	Fatally injured in No. 2 ¹ / ₂ West lift, No. 1 Cooper vein. He had fired a blast in the top slate, and when he returned to the face of his chamber a large quantity of slate that had been loosened by the blast fell on him. He was taken to his home where he died the same day.
July 8	David Thomas, -----	Welsh, ---	Miner, ---	27	S. -----	Lance No. 11, ----	Fatally injured in No. 14 tunnel, East Hillman vein, by an explosion of gas. Safety lamps are used exclusively in this mine on account of the numerous feeders of gas that exist on the gangway. Just a few minutes before the accident occurred Thomas, who was driving a team of mules, ran a car down from a chamber to the gangway. According to his testimony the explosion was caused by his safety lamp falling from his hand to the floor of the mine, which resulted in the flame passing through the gauze and igniting a feeder that communicated with other feeders. A pipe, however, was found near the place of the explosion and it was the opinion of some persons that Thomas ignited the gas while trying to light his pipe. He denied this. He died July 25.

Luzerne, -----

TABLE 4.—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Mine	County	Nature and Cause of Accident in Brief
July 21	Michael Grekie,-----	Polish, -----	Miner, -----	33	M. 1	1	----	Kingston No. 2, --		Instantly killed in Lance vein. He had tried to bar down a piece of bony rock, but failed, and he was barring out some coal directly under it when it fell on him.
Aug. 18	Joseph Katufski, ----	Lithuanian, -----	Miner, -----	32	M. 1	1	----	Dodson, -----	Luzerne, -----	Fatally injured in No. 1 lift, West Red Ash vein. He went to the box, which was about one hundred and fifty feet from the face of his chamber, to prepare a charge of powder. He then started back to the chamber and when he had gone about half way a piece of rock fell on him. He was taken to the Mercy Hospital where he died the same day. The fall was caused by a slip. Water percolating through the roof also helped to loosen the roof, which before the fall had been pronounced safe.
26	Stanley Woizeck, ---	Polish, -----	Miner, -----	38	M. 1	5	----	Kingston No. 2, ---		Instantly killed in Orchard vein. He was working out some coal after a blast when a piece of rock fell on him. The place was well propped, but the roof evidently lost its support, due to undermining.

Aug. 29	Thomas Gibbons, -----	Welsh, -----	Miner, -----	58	M.	1	5	In_oston No. 2, --	Instantly killed. Fell down No. 2 shaft from Lance vein to bottom of shaft. He had signaled the engineer to hoist him to the surface from the Lance vein, but in some manner he fell down the shaft. The colliery on that day was idle and there was no one present at the time the accident occurred. It is thought after the signal had been given to hoist he delayed in getting on the carriage. When he stepped on the carriage it commenced to ascend and before he could regain his proper balance a portion of his body came in contact with the roof of the vein, which threw him back on the floor of the mine. A portion of his body projected over the side of the shaft and before he could gain a hold he fell to the bottom.
Sept. 3	Alfred Jones, -----	American, -----	Shaft-head-man.	27	M.	1	1	Innan No. 21, ---	Instantly killed. He, in company with a charge-man, was standing on the bucket to remove the chain when he lost his balance and fell down the sinking shaft, a distance of two hundred and forty feet.
6	James Williams, -----	English, -----	Laborer, ----	32	M.	1	1	Dodson, -----	Fatally injured by fall of rock. He with several other men was timbering the head of the slope in the Ross vein. A slight squeeze that had taken place a few days before was pushing the timber toward the slope road. While a trip of timber and lagging was being lowered to the point of work the latch of a car caught in the timber dislodging several sets. Rock that had been held back by the timber became loosened and rushed down on the slope road, catching Williams before he could escape. He died the same day.
15	Frank Urbanski, -----	Polish, ----	Laborer, ----	21	S.	-----	-----	Woodward, -----	Fatally injured by fall of top rock in Ross vein. His miner stated that he had made a thorough examination of the roof and found it safe. He died at Moses Taylor Hospital, September 16.

TABLE 4.—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Mine	County	Nature and Cause of Accident in Brief
Sept. 21	Anthony Mikleik, ----	Slavonian,	Miner, -----	33	M.	1	1	Buttwood, -----		Fatally injured by premature blast in Old Bennett vein. After lighting the squib he started to run to a place of safety. When he had gone but a few yards the blast exploded and he was struck by the flying coal which fractured his skull. He died at the City Hospital, September 22.
22	George Botkowski, ----	Lithuanian,	Laborer, ----	23	S.	-----	-----	Kingston No. 2, ----	Luzerne,	Instantly killed by fall of top coal in Ross vein. His miner fired two blasts in the top coal and then proceeded to the face where he discovered some loose rock, which he pulled down. Thinking that he had trimmed down all loose coal and rock he asked Botkowski to come to the face, and while they were loading a car a piece of top coal fell, killing Botkowski.
22	George Yonka, -----	Polish, ----	Laborer, ----	27	S.	-----	-----	Gaylord, -----		Instantly killed. Run over by cars on Ross vein plane. He was told not to go down the plane as a trip was about to be lowered, but he did not heed the warning. While the headman and his assistant were running a trip from the branch to the head of the plane Yonka decided to go down, but before he had reached the foot of the plane his lamp, it is supposed, became extinguished, and while groping about in the darkness he was struck by the plane trip. His body was found shortly afterward by a laborer who was going down the plane on his way home.

Sept. 30	William Kuzyan, -----	Polish, ----	Ashman, ----	23	S. -----	Parrish, -----	Fatally injured. Some carpenters were tearing down the end of a boiler room when by accident a board, twelve feet long, slipped out of the hands of one of the carpenters and fell twenty-four feet, striking Kuzyan on the head and fracturing his skull. He himself had warned other workmen in the boiler room not to walk in and about the place where the carpenters were at work, but he disobeyed the orders that he had given others. He died at City Hospital, October 14.
Oct. 8	John Wilkes, -----	American, ----	DoorBoy, ----	16	S. -----	Plymouth No. 2, ----	Instantly killed. He was ascending the shaft with nine other boys when in some unknown manner he fell to the bottom of the shaft. It seems from the evidence of some of the boys that they were playing while ascending the shaft, striking each other on the head and laughing and yelling, and during the confusion Wilkes was thrown out the cage and down the shaft. Orders had been issued prior to the accident and any person found playing while descending or ascending the shaft would be immediately discharged.
23	Onuftun Misarca, -----	Polish, ----	Miner, ----	36	M. 1 3	Woodward, -----	Instantly killed by fall of top rock in shaft level, East Ross vein. He and his laborer were at the box when a fall occurred toward the face. They went in immediately to see what had happened and found that about three cars of rock had fallen. Misarca sounded the roof and pronounced it safe, and they had almost finished cleaning up the rock when a second fall occurred, catching Misarca. The fall was caused by slips in the roof.

Lazerne, -----

TABLE 4.—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Mine	County	Nature and Cause of Accident in Brief
Oct. 30	John Gilonas, -----	Polish, ----	Miner, -----	47	M.	1	3	Lance No. 11, ----		Fatally injured in West gangway, No. 11 tunnel, Cooper vein. When the runner went up the chamber to run his car he told Gilonas, who was sitting on the tool box just opposite a curve, that he was in a dangerous position as the car might jump the track and run into the box. He, however, remained on the curve a few minutes later he discovered that the car was derailed and Gilonas had been fatally injured by the flying coal. Upon further investigation it was found that his neck was broken. He died in a few minutes.
Nov. 12	Jacob Steinkinas, ----	Lithuanian, Miner, -----		41	M.	1	3	Woodward, -----	Luzerne, -----	Instantly killed by fall of rock in No. 3 West lift, No. 2 slope, Cooper vein. After firing a blast in the rider coal he returned to the face of his chamber, and while he was sounding the roof a large slab of rock fell on him from between a set of double timber, very close to the face and the right hand rib, in a space of about six feet. It had a slip on one side that ran to a feather edge.

Fatally burned by explosion of gas in No. 2 slope, Red Ash vein. When he reported for work in the morning the air boss told him that he had discovered about four inches of gas in a cavity in the roof of his chamber and that he should not go into it until the danger had been removed and the place pronounced safe, but Langdon went into his chamber and worked until sometime in the afternoon, when by some means he ignited the gas, causing the explosion. He died at the Moses Taylor hospital, November 28.

Fatally injured in No. 1 slope, Red Ash vein. He was descending a mine per cent. grade with a loaded car that contained four sprags, the car being in front of the motor. He must have been running at an unusual speed for when the car jumped on at the frog he was so close to a trip of five loaded cars standing on the level road that it was impossible for him to check the speed of the motor before they ran into the trip which caused the rear end of the car to jump up on the motor, squeezing him. After the power was restored to the motor he reversed it and then called for help. He died the next day. If he had had the motor under control he could have stopped it by applying the brake. He was trying to adjust the trolley to the wire when the accident occurred.

Instantly killed by fall of top coal in No. 3 slope, Red Ash vein. He was barring down top coal when a large piece of the coal fell on him. The fall was caused by an unseen slip.

Instantly killed in Ross vein. He had fired a blast in the coal in the absence of his miner and was working out the remainder of the shot when a large piece of rock fell on him. He had been told to go home by several persons, as he was not permitted to work in the chamber when his miner was not there.

Nov. 13	John Langdon, ----- American,-----	55	M.	1	J	Woodward, -----	
24	James O'Malia, ----- American,-----	21	S.	-----	-----	Woodward, -----	
							Luzerne.
25	Michael Emel, ----- Slavonian,-----	36	M.	1	5	Nottingham No. 15	
25	Modes Goral, ----- Russian,-----	20	S.	-----	-----	Kingston No. 2, ---	

TABLE 4.—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Mine	County	Nature and Cause of Accident in Brief
Dec. 15	John Risch, -----	Austrian, ---	Driver, -----	18	S	-----	-----	Plymouth No. 5,---		Fatally injured on No. 1 plane, Five Foot vein. While he was taking an empty car up the counter gangway to a chamber, the runner ran a car down to the gangway from an inside chamber and the cars collided, injuring Risch. He died at the hospital, December 27. The runner should have waited to run his car until the gangway was clear, but he thought that the driver had shifted all his cars.
19	William Chambers, -----	English, ----	Miner, -----	73	S.	-----	-----	Nottingham No. 15,	Luzerne, -----	Fatally injured in No. 1 slope, Red Ash vein. He was working a top coal chamber and was on his last fall, a short distance from the gangway. According to the statement of his laborer, he had prepared a shot and after lighting the fuse stepped down off the gob on to the road. While he was proceeding to the gangway the blast fired, loosening a large piece of coal which fell and rolled off the gob, catching him before he could retreat to a place of safety. He died at the City Hospital, December 26.

TABLE 5.—Non-fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Mine	County	Nature and Cause of Accident in Brief
Jan. 2	William May, -----	English, ----	Inside foreman, --	46	M.	Plymouth No. 2, --		Leg fractured and body bruised by cage catching guides in shaft when descending.
8	Wilson Cease, -----	American, --	Slatepicker, ---	17	S.	Plymouth, No. 2, ---		Leg amputated. Caught in pit by conveyor line. Outside.
16	John Hoffman, -----	German, ---	Driver, -----	17	S.	Avondale, -----		Leg fractured. Struck by car while crossing the track on gangway.
17	Peter Deuchas, -----	Lithuanian, --	Laborer, -----	22	S.	Lance No. 11, -----		Hip dislocated. He fell and was struck by an empty car on gangway.
25	Stephen Nedumski, --	Polish, ---	Miner, -----	38	M.	Lance No. 11, -----		Shoulder dislocated by a fall of rock at face of airway.
Feb. 4	Michael Yoncha, ----	German, ---	Laborer, -----	29	M.	Woodward, -----		Ankle fractured. Struck by piece of coal that burst from pillar at face of chamber.
4	Richard Scott, -----	American, --	Slatepicker, ---	15	S.	Plymouth No. 3, --		Arm fractured. Fell off platform while playing with other boys. Out ide.
4	Stanley Wastavich, --	Polish, ---	Miner, -----	26	S.	Woodward, -----		Pelvis fractured by fall of rock while preparing to set timber at face of chamber.
6	Peter Acolavage, ----	Polish, ---	Miner, -----	39	M.	Kingston No. 2, ---		Pelvis fractured. Squeezed between door frame and loaded car on gang way.
8	Thomas Jones, -----	Welsh, ----	Brakeman, ----	22	S.	Kingston No. 2, ---		Foot fractured. Squeezed between derailed cars on gangway.
11	Gwilliam Lloyd, -----	American, --	Miner, -----	38	S.	Kingston No. 2, ---		Leg fractured by fall of top coal at face of chamber.
12	William Makowski, ---	Lithuanian, --	Laborer, -----	22	S.	Woodward, -----		Leg bruised and little toe almost cut off by cars. Caught in frag while sliding his foot on rail on gangway.
12	Ritz Katulka, -----	Russian, ---	Miner, -----	32	M.	Buttonwood, -----		Lacerated scalp and emission of brain by fall of rock at face of chamber.
15	Michael Baron, -----	Austrian, --	Miner, -----	26	M.	Plymouth No. 4, --		Leg fractured by lump of coal that slid off the gob at face of chamber.

TABLE 5.—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Mine	County	Nature and Cause of Accident in Brief
Feb. 18	Gwiliam Thomas, --	Welsh, ----	Laborer, ----	39	M.	Innan No. 21, ----		Foot fractured by fall of rock while cutting trench in side of sinking shaft.
Mar. 3	John Griffiths, ----	Welsh, ----	Mason, ----	40	M.	Woodward, ----		Burned by explosion of gas at face of chamber.
4	John Demonski, ----	Polish, ----	Laborer, ----	23	M.	Boston, ----		Compound fracture of leg by piece of coal that rolled off the gob at face of chamber.
6	Evan Phillips, ----	American, --	Company laborer, --	23	M.	Buttonwood, ----		Hand crushed between blk and wheel while blocking car on gangway.
9	Stanley Dietz, ----	Polish, ----	Miner, ----	26	M.	Plymouth No. 3, --		Ankle fractured by piece of coal that fell from pillar at face of chamber.
11	Martin Mazarik, ----	Russian, --	Laborer, ----	24	M.	Nottingham No. 15, --		Burned by explosion of gas at face of chamber.
11	John Corteski, ----	Russian, --	Laborer, ----	29	M.		Luzerne, ----	
12	Charles Bockunis, ----	Russian, --	Miner, ----	42	S.	Parrish, ----		Burned by explosion of gas at face of chamber.
12	Stephen Barnoski, ----	Russian, --	Laborer, ----	21	S.	Parrish, ----		Burned by explosion of gas at face of chamber.
14	Joseph Price, ----	American, --	Doorboy, ----	17	S.	Kingston No. 2, ----		Squeezed between car and rib due to misplaced switch on gangway.
16	Thomas Williams, ----	Welsh, ----	Runner, ----	21	S.	Gaylord, ----		Body bruised while uncoupling cars in motion he fell under them.
26	Peter Koveloski, ----	Polish, ----	Laborer, ----	28	S.	Kingston No. 2, ----		Lower jaw fractured. Fell when walking down chamber.
31	Peter Levenski, ----	Polish, ----	Miner, ----	42	M.	Reynolds No. 16, --		Body bruised by fall of top coal while loading car at face of chamber.
April 3	Richard Jones, ----	Welsh, ----	Laborer, ----	34	S.	Lance No. 11, ----		Burned by explosion of gas at face of airway.
3	Richard Lewis, ----	Welsh, ----	Miner, ----	42	M.	Lance No. 11, ----		Burned by explosion of gas at face of airway.

April	4	George Mikulski,	Polish, ---	Doorboy, ---	16	S.	Lance No. 11, ---	Compound fracture of arm. Caught between car and door on gangway.
	10	Robert Roberts,	Welsh, ---	Locomotive engineer, ---	39	M.	Woodward, ---	Ribs fractured by motor of runaway trip that became derailed on gangway.
	10	David Edwards,	Welsh, ---	Brakeman, ---	52	M.	Woodward, ---	Arm fractured by runaway trip of cars that became derailed on gangway.
	10	Robert Williams,	American, ---	Miner, ---	22	M.	Kingston No. 2, ---	Arm fractured. Fell off a plank while setting timber at face of chamber.
	10	Henry Heinz,	German, ---	Miner, ---	58	M.	Plymouth No. 4, ---	Ribs fractured. Fell when walking down the chamber road.
	14	John Dagul,	Lithuanian, ---	Laborer, ---	26	S.	Plymouth No. 4, ---	Compound fracture of leg. Struck by runaway car on slope.
	16	Edward Lewis,	American, ---	Driver, ---	19	S.	Woodward, ---	Leg fractured. Struck by slope rope while sitting on slope.
	16	Frank Menil,	Polish, ---	Doorboy, ---	16	S.	Nottingham No. 15, ---	Leg fractured. Struck by a derailed car on gangway.
	18	George Parsons,	American, ---	Bratticeman, ---	30	M.	Woodward, ---	Burned by explosion of gas when constructing brattice in Cooper vein tunnel.
	18	George Guring,	American, ---	Bratticeman, ---	26	M.	Woodward, ---	Burned by explosion of gas when constructing brattice in Cooper vein tunnel.
	18	Thomas Walsh,	American, ---	Rockman, ---	38	M.	Woodward, ---	Burned by explosion of gas when at work at face of Cooper vein tunnel.
	20	Evan Evans,	Welsh, ---	Company laborer, ---	42	M.	Buttonwood, ---	Ribs fractured and body bruised. His foot became fastened in an iron plate and a car ran over him on gangway.
	21	James Meakin,	English, ---	Miner, ---	43	M.	Plymouth No. 3, ---	Face and hands burned by powder while handling powder with a naked lamp on his head in airway.
	23	William Gidy,	Austrian, ---	Miner, ---	28	M.	Woodward, ---	Face, hands and breast burned by powder while charring hole at face of chamber.
May	2	Fred Vanloon,	American, ---	Brakeman, ---	19	S.	Nottingham No. 15, ---	Foot amputated. Caught under derailed car. Outside.
	5	Thomas Flanagan,	Irish, ---	Motorman, ---	26	S.	Gaylord, ---	Ribs fractured and hand injured. Squeezed between motor and cars on gangway.
	7	Joseph Draga,	Polish, ---	Laborer, ---	21	S.	Nottingham No. 15, ---	Burned by explosion of gas while loading car at face of chamber.
	9	David Jenkins,	American, ---	Plane runner, ---	30	M.	Buttonwood, ---	Body badly injured. Struck by trip of cars on slope.
	11	Peter Jack,	Slavonian, ---	Laborer, ---	19	S.	Plymouth No. 2, ---	Leg fractured. Struck by flying coal from blast at face of chamber.
	15	Joseph Kossulock,	Austrian, ---	Miner, ---	28	S.	Buttonwood, ---	Face, neck and hands burned by explosion of gas at face of chamber.
	20	Michael Sebeliski,	Polish, ---	Laborer, ---	33	M.	Chauncey, ---	Both hands blown off while thawing dynamite with his naked light in chamber.
	26	Peter Kuckla,	Austrian, ---	Rock unloader, ---	28	M.	Buttonwood, ---	Body injured. Was running ahead of empty trip when cars ran into him on gangway.

Luzerne, ---

TABLE 5.—(Continued)

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Mine	County	Nature and Cause of Accident in Brief
May 26	August Fenick, ----	Polish, ----	Laborer, ----	28	M.	Gaylord, ----		Back and hips bruised by fall of rock at face of chamber.
June 3	Stanley Miskel, ----	Russian, ----	Laborer, ----	23	S.	Plymouth No. 2, ----		Collar bone fractured by fall of rock at face of chamber.
4	Frank Sadoski, ----	Polish, ----	Miner, ----	40	M.	Nottingham No. 15, ----		Burned by explosion of gas at face of chamber.
10	William Mooney, ----	American, ----	Company timberman, ----	40	M.	Reynolds No. 16, ----		Leg fractured. Car ran into him on gangway.
16	Joseph Suddo, ----	Polish, ----	Laborer, ----	30	M.	Buttwood, ----		Compound fracture of leg by fall of slate at face of chamber.
26	Henry Kettle, ----	American, ----	Miner, ----	32	M.	Avondale, ----		Ribs fractured and arms cut. Struck by trip of cars on gangway.
29	Michael Omalanis, ----	Russian, ----	Laborer, ----	36	M.	Nottingham No. 15, ----		Body injured by fall of top coal at face of chamber.
July 2	Ignas Mavitski, ----	Russian, ----	Driver, ----	23	M.	Nottingham No. 15, ----	Luzerne,	Body injured. Squeezed between ear and door frame on gangway.
7	James Manning, ----	American, ----	Boss-footman, ----	29	M.	Plymouth No. 2, ----		Left knee and ankle dislocated by cage striking fans in shaft.
7	Joseph Hummer, ----	German, ----	Footman, ----	36	M.	Plymouth No. 2, ----		Ligaments of right leg torn by cage striking fans in shaft.
7	Edward Billings, ----	English, ----	Pumpman, ----	41	M.	Plymouth No. 2, ----		Spine injured by cage striking fans in shaft.
8	John Keefe, ----	American, ----	Doorboy, ----	17	S.	Lance No. 11, ----		Hands, face and body burned by the ignition of a feeder on gangway.
11	William Morris, ----	American, ----	Brakeman, ----	20	S.	Woodward, ----		Right hand mangled by wheels of an electric motor on gangway.
17	Nicholas Yausko, ----	Slavonian, ----	Miner, ----	25	M.	Plymouth No. 2, ----		Face and hands burned by an explosion of gas in face of chamber.
22	John Jenkins, ----	Welsh, ----	Driver, ----	17	S.	Nottingham No. 15, ----		Wrist fractured. Squeezed between mule and ear on gangway.

July	23	John Sippel, -----	American,---	Laborer, -----	35	S.	Plymouth No. 2, ---	Collar bone broken. A stick of timber fell against him at face of chamber.
	25	Joseph Phibbeu, ----	Slavonian, ---	Laborer, -----	38	M.	Avondale, -----	Ribs fractured. Fell from a car while unloading hay. Outside.
	29	Barney Gilshefski, ---	Lithuanian, ---	Miner, -----	33	M.	Nottingham No. 15, ---	Face and hands burned by explosion of gas at face of chamber.
Aug.	10	John Mogosey, -----	Polish, -----	Laborer, -----	44	M.	Plymouth No. 5, ---	Compound fracture of leg by fall of rock at face of chamber.
	11	David T. Davis, -----	Wash, -----	Engineer, -----	50	M.	Nottingham No. 15, ---	Pelvis fractured. Struck by loaded car on gangway.
	17	Hiram Lewis, -----	American,---	Timber cutter, ---	68	M.	Nottingham No. 15, ---	Leg fractured. Struck by piece of timber. Outside.
	31	John Williams, -----	American,---	Laborer, -----	31	S.	Inman No. 21, -----	Ribs fractured and hip injured. Fell off scaffold. Outside.
Sept.	11	Edward Deboice, -----	American,---	Rockman, -----	35	M.	Woodward, -----	Leg fractured by piece of rock that rolled against him in shaft.
	25	Stanley Miskel, -----	Russian, ---	Laborer, -----	24	S.	Plymouth No. 2, ---	Face, neck and hands burned by spark igniting powder on gangway.
	29	Michael Leonard, -----	Austrian, ---	Miner, -----	30	M.	Plymouth No. 2, ---	Body injured by fall of rock at face of chamber.
	30	Joseph Devewick, ----	Lithuanian, ---	Miner, -----	30	S.	Woodward, -----	Shoulder dislocated and body injured by flying coal from premature blast at face of chamber.
Oct.	1	James Evans, -----	American,---	Slope-footman, ---	18	S.	Buttonwood, -----	Internally injured. Squeezed between cars on slope.
	5	John Lawynski, -----	Polish, -----	Runner, -----	20	M.	Plymouth No. 3, ---	Leg fractured. Thrown under derailed car at head block on gangway.
	6	William Jenkins, -----	American,---	Driver, -----	19	S.	Nottingham No. 15, ---	Hips bruised and back squeezed between car and prop on gangway.
	9	Samuel Reynolds, -----	English,-----	Timberman, -----	22	M.	Nottingham No. 15, ---	Arm fractured. Caught between empty car and stick of timber on gangway.
	31	Adam Kresoska, -----	Lithuanian, ---	Laborer, -----	28	S.	Nottingham No. 15, ---	Burned by explosion of gas at face of chamber.
Nov.	5	Thomas Dugan, -----	American,---	Driver, -----	18	S.	Plymouth No. 2, ---	Leg fractured. Mules stumbled and fell on him in chamber.
	9	Benjamin James, -----	Welsh, -----	Miner, -----	42	M.	Dodson, -----	Nose fractured by fall of top coal at face of chamber.
	16	Patrick Price, -----	Irish, -----	Miner, -----	43	M.	Woodward, -----	Compound fracture of arm by fall of rock at foot of chamber.
	19	Daniel Alexander, -----	Russian, ---	Miner, -----	28	M.	Nottingham No. 15, ---	Head, face and hands burned when charging a hole at face of chamber.
	23	Charles Smith, -----	German, ---	Laborer, -----	55	M.	Kingston No. 2, ---	Leg fractured by stick of timber rolling on him. Outside.
	23	Joseph Johnston, -----	American,---	Laborer, -----	36	M.	Reynolds No. 16, ---	Leg fractured by fall of slate at face of chamber.
Dec.	6	Thomas Richards, ----	Welsh, -----	Miner, -----	49	M.	Parrish, -----	Arms and body bruised by premature blast. Attached battery to bell wire on gangway.

Luzerne, -----

TABLE 5.—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Mine	County	Nature and Cause of Accident in Brief
Dec. 6	Edward Reese, -----	Welsh, -----	Timberman, -----	39	M.	Parrish, -----		Head and body bruised by premature blast. Attached battery to bell wire on gangway. Back injured by fall of rock at face of chamber.
7	John Wilk, -----	Polish, -----	Miner, -----	24	M.	Kingston No. 2, -----		Wrist and left thigh fractured. Fell out of car when unloading timber. Outside.
8	Michael Fetter, -----	Slavonian, -----	Dumpman, -----	36	S.	Dodson, -----		Leg fractured and body burned by powder while forcing cartridge with drill in face of chamber.
9	John Welback, -----	Polish, -----	Miner, -----	23	M.	Woodward, -----		Arm fractured while playing tag with other boys. Outside.
9	William Gallagher, --	American, --	Slatepicker, -----	16	S.	Plymouth No. 3, -----	Luzerne, -----	Back and side lacerated. He stumbled and fell and car ran over him on gangway.
11	Anthony Cominski, --	Polish, -----	Driver, -----	22	S.	Woodward, -----		Leg fractured. Struck by stick of timber. Outside.
16	Walter Torney, -----	American, --	Laborer, -----	29	S.	Nottingham No. 15, -----		Spine fractured by fall of slate at face of chamber.
21	Michael Lumas, -----	Lithuanian, -----	Miner, -----	30	M.	Nottingham No. 15, -----		Thigh fractured while crossing moving cars. Outside.
21	Michael McHale, -----	Irish, -----	Miner, -----	53	M.	Kingston No. 2, -----		Toes of right foot cut off by fall of rock at face of chamber.
21	Anthony Niesczek, ---	Polish, -----	Laborer, -----	28	S.	Boston, -----		

CONDITION OF COLLIERIES

LEHIGH AND WILKES-BARRE COAL COMPANY

Nottingham No. 15 Colliery.—Ventilation, drainage and general condition as to safety good.

Lance No. 11 Colliery.—Ventilation, drainage and condition as to safety good.

Reynolds No. 16 Colliery.—General condition as to safety good.

KINGSTON COAL COMPANY

Kingston No. 2 Colliery.—No. 2 Shaft, general condition as to safety good. In lower road, Upper East Lance, also including East Lance Vein old tunnel, ventilation fair; drainage generally good.

Kingston No. 3 Shaft.—I found the ventilation in this shaft much better, with the exception of Shaft level, Ross vein, and Toners road, Orchard vein, which were only fairly well ventilated.

The foreman of both shafts stated that ample ventilation would be conveyed (secured) in a short time to these defective parts. The work done is principally robbing pillars, which makes it more difficult to maintain the air in the working face.

Tunnel 41, Red Ash vein, general condition as to safety good.

Tunnel 42, Red Ash vein, general condition good; ventilation fair.

Tunnel 43 and 44, general condition as to safety good; ventilation improved.

Gaylord Colliery.—General condition as to safety good.

DELAWARE AND HUDSON COMPANY

Boston Colliery.—General condition as to safety good.

Plymouth No. 3 Colliery.—General condition as to safety good.

Plymouth No. 5 Colliery, No. 4 Mine.—General condition as to safety good.

Plymouth No. 5 Colliery.—General condition as to safety good.

Plymouth No. 2 Colliery.—General condition as to safety good.

PARRISH COAL COMPANY

Buttonwood Colliery.—General condition as to safety good.

Parrish Colliery.—General condition as to safety good.

PLYMOUTH COAL COMPANY

Dodson Colliery.—General condition as to safety good.

GEORGE F. LEE COAL COMPANY

Chauncey Colliery.—Ventilation and drainage fair; condition as to safety good.

BRIGHT COAL COMPANY

Hillside Colliery.—Ventilation fair; drainage good; condition as to safety good.

IMPROVEMENTS

LEHIGH AND WILKES-BARRE COAL COMPANY

Lance No. 11 Colliery, Inside.—No. 25 Tunnel, Cooper to Baltimore.
Nottingham No. 15 Colliery, Outside.—New wash house.

Inman No. 21.—Sinking shaft. Continued sinking Baltimore and Red Ash shafts.

KINGSTON COAL COMPANY

Kingston No. 2 Colliery.—A new washery, capacity 1,000 tons per day, has been completed midway between No. 2 breaker and No. 4 breaker, said washery complete with duplicate shakers, rolls, elevators and conveyors and Jeffrey crushers.

Three bore holes driven so that all waste from the breaker is flushed into the mines.

Shipment began from the washery in the month of May.

A new brick boiler house equipped with 600 H. P. water tube boilers, feed pumps and water heaters.

A wet addition was completed to the breaker equipped with duplicate shakers, elevators, rolls and Jeffrey crushers.

The dry part of the breaker is being entirely remodeled, work on which will be completed in the fore part of 1909.

All circular screens are being substituted with shakers.

The old plane has been abandoned and a new location made away from the breaker and at a much easier grade, which removes the unsafe condition.

A new brick office and retail scales complete.

The tracks on the loaded and empty sides of the breaker have been changed and new railroad scales set in place.

A new steel concrete bridge has been completed over Jackson avenue dispensing with the old wooden structure.

Special attention has been given the remodeling of the emergency hospital in the Nos. 2 and 3 Shaft districts; also a brick combination hospital and foreman's office built at the old slope.

The equipment has been increased with two new locomotives and cars for the Mountain tunnel development.

Gaylord Colliery.—A new washery, with a capacity of 1,000 tons per day, was completed and operation begun in March; the washery is completed with duplicate shakers, rolls, elevators and conveyors and Williams crushers, and also acts as a wet side or mud screen adjunct to the breaker.

Two new Goyne pumps 28 x 10 x 33 pump silt through 8 and 10 inch culm lines 3,000 feet to bore holes, so that all the refuse from the washery and breaker is flushed into the mines.

Series of six holes have been completed for flushing purposes.

Two bore holes for steam exhaust and culm pipe and a new pump outfit completed in Bennett vein.

During the months of July and August the breaker was remodeled and all circular screens dispensed with, shakers being substituted, also modern rolls, crushers, etc.

New brick blacksmith and carpenter shop completed; new brick oil house and hospital and new brick warehouse completed.

Fifty foot addition to stable.

Addition of 300 H. P ; B. and W. boilers completed for washery.

Electric haulage is now in service between the Red Ash vein and foot of slope.

DELAWARE, LACKAWANNA AND WESTERN RAILROAD COMPANY

Woodward Colliery.—The work of sinking Woodward No. 3 Shaft on the Kingston flats has progressed to a depth of 450 feet. The shaft will be completed during this year to the Baltimore vein.

The rock tunnels have been driven from the Cooper to Five Foot vein for development.

The work of installing the sub-station mentioned in last year's report has been completed, but it is not yet in operation.

The No. 2 Shaft hoisting engines have been equipped with new drums and clutch arrangement; also steam brake and reverse.

The three slide valve breaker engines have been replaced with three compound Corliss valve engines, in order to economize in the consumption of steam with very good results.

Four new concrete and steel air bridges have been built during the year.

Avondale.—The work of installing an inside sub-station mentioned in last year's report is now completed and is in operation and running order.

The Ross shaft has been abandoned as a hoistway and will be used hereafter as an air shaft only.

One concrete and steel air bridge has been erected on 4½ East lift, No. 2 Slope, Red Ash vein.

A rock tunnel was driven from Ross vein to surface for second opening to Ross and Red Ash veins.

DELAWARE AND HUDSON COMPANY

Plymouth No. 2 Colliery.—Rope hole, 93 feet deep, drilled for No. 7 plane.

Air shaft to Lance vein sunk 40 feet.

No. 9 slope, Top Ash vein, driven 340 feet.

Plymouth No. 3 Colliery.—Air shaft to Lance vein sunk 40 feet deep.

No. 9 plane, Station vein, extended 450 feet.

Plymouth No. 5 Colliery.—Slush hole for ashes drilled 448 feet deep.

No. 2 slope Cooper vein, rope hole drilled 177 feet deep.

Rock slope from Bennett to Cooper vein completed 350 feet long.

Four Emery slate pickers installed in breaker.

Boston Colliery.—New plane No. 6 driven from Boston to Plymouth No. 5 in Bottom Red Ash 4,200 feet long, to take Boston coal to Plymouth No. 5 breaker. Rope hole 446 feet deep drilled, and pair of 22 x 48 inch Dickson engines installed. Boston breaker has been abandoned.



Tenth District

LUZERNE COUNTY

Wilkes-Barre, Pa., February 20, 1909.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor of transmitting herewith my annual report as Inspector of Mines of the Tenth Anthracite District for the year ending December 31, 1908.

The report contains the statistical information required by law, with brief descriptions of the fatal accidents and the condition of mines.

Respectfully submitted,

JOS. J. WALSH, Inspector.

SUMMARY OF STATISTICS

Number of collieries,	9
Number of mines,	38
Number of mines in operation,	38
Number of tons of coal shipped to market,	3,609,017
Number of tons used at mines for steam and heat,	350,238
Number of tons sold to local trade and used by employes,	49,406
Number of tons produced,	4,008,661
Number of tons produced by compressed air machines, ..	—
Number of tons produced by electrical machines,	—
Number of persons employed inside of mines,	6,592
Number of persons employed outside,	2,221
Number of fatal accidents inside of mines,	41
Number of fatal accidents outside,	7
Number of non-fatal accidents inside of mines,	53
Number of non-fatal accidents outside,	12
Number of tons of coal produced per fatal accident inside, ..	97,772
Number of persons employed per fatal accident inside, ..	161
Number of persons employed per fatal accident outside, ..	317
Number of persons employed per non-fatal accident inside, ..	124
Number of persons employed per non-fatal accident outside, ..	185
Number of wives made widows,	26
Number of children orphaned,	84
Number of steam locomotives used inside of mines,	2
Number of steam locomotives used outside,	23
Number of compressed air locomotives used inside,	13
Number of electric motors used inside,	26
Number of electric motors used outside,	1
Number of fans in use,	35
Number of gaseous mines in operation,	27
Number of non-gaseous mines in operation,	11
Number of new mines opened,	3
Number of old mines abandoned,	1

TABLE A

PRODUCTION OF COAL

Names of Operators	Tons
Susquehanna Coal Company,	1,438,367
Delaware, Lackawanna and Western Railroad Company,	998,199
West End Coal Company,	722,197
Lehigh and Wilkes-Barre Coal Company,	523,271
Alden Coal Company,	326,627
Total,	4,008,661
Production by Counties	
Luzerne,	4,008,661

TABLE B.—Fatal and non-fatal accidents inside and outside of mines; number of tons of coal produced per accident; number of persons employed; number employed per accident

Names of Operators	Fatal Accidents			Non-fatal Accidents			Tons of coal produced per fatal accident inside	Tons of coal produced per non-fatal accident inside	Number of employees inside	Number of employees outside	Total number of employees	Number of employees inside per fatal accident	Number of employees outside per fatal accident	Number of employees inside per non-fatal accident	Number of employees outside per non-fatal accident
	Fatal Accidents		Non-fatal Accidents		Total										
	Inside	Outside	Inside	Outside	Inside	Outside										Total
Susquehanna Coal Co., -----	21	5	26	18	4	22	68,494	79,909	2,485	1,099	3,584	118	220	138	275
Delaware, Lackawanna and Western Railroad Co., -----	10	-----	10	11	1	12	99,820	59,745	1,811	418	2,229	181	-----	165	418
West End Coal Co., -----	8	1	9	10	2	12	59,275	72,220	1,144	322	1,466	143	322	114	161
Lehigh and Wilkes-Barre Coal Co., -----	2	1	3	9	3	12	261,635	58,141	685	189	874	343	189	76	63
Alden Coal Co., -----	-----	-----	-----	5	2	7	-----	65,325	467	193	660	-----	-----	93	96
Totals and averages for district,--	41	7	48	53	12	65	97,772	75,635	6,592	2,221	8,813	161	317	124	185

TABLE C.—Classification of Fatal Accidents Inside and Outside of Mines

	Months												Totals	Percentages	
	January	February	March	April	May	June	July	August	September	October	November	December			
Causes of Accidents Inside															
Falls of coal, -----			2		1					1				4	9.75
Falls of roof, -----	1		1			4	2					1	2	13	31.71
Mine cars, -----		2				1						1		4	9.75
Explosions of gas and dust, -----						4								4	9.75
Explosions of powder and dynamite, -----	1			1										2	4.88
Premature blasts, -----	1						2	1		1				5	12.20
Falling into slopes, etc., -----						1					1	1		3	7.32
Mules, -----											1			1	2.44
Miscellaneous, -----	1	1						1	1			1		5	12.20
Totals, -----	4	3	3	1	10	5		2	1	4	4	4	41	100.00	
Causes of Accidents Outside															
Cars, -----		1									1			2	28.57
Machinery, -----									1		2			3	42.86
Miscellaneous, -----				1					1					2	28.57
Totals, -----	1	1	1	1	1	1	1	1	2	3	3	7	100.00		
Grand totals inside and outside, -----	4	4	3	2	10	5		2	3	4	7	4	48		

TABLE D.—Classification of Non-fatal Accidents Inside and Outside of Mines

	Months												Totals	Percentages	
	January	February	March	April	May	June	July	August	September	October	November	December			
Causes of Accidents Inside															
Falls of coal, -----		2	1				1		2			3	7	13.21	
Falls of roof, -----	3		1			1		2	2	1			10	18.87	
Mine cars, -----		2	2	2	2		2	1	2	1		3	17	32.08	
Explosions of gas and dust, -----										1	2		3	5.66	
Explosions of powder and dynamite, -----				1			1		1				3	5.66	
Premature blasts, -----							1		1			1	3	5.66	
Falling into slopes, etc., -----								1	1		1		3	5.66	
Mules, -----		1				1							2	3.77	
Miscellaneous, -----	1					1	1		1			1	5	9.43	
Totals, -----	4	5	4	3	2	3	6	4	8	3	3	8	53	100.00	
Causes of Accidents Outside															
Cars, -----	1	2		1			1			1			6	50.00	
Machinery, -----			1										1	8.33	
Miscellaneous, -----						3			1	1			5	41.67	
Totals, -----	1	2	1	1	3	1	1	1	2	2	12	100.00			
Grand totals inside and outside, -----	5	7	5	4	2	6	7	4	9	5	3	8	65		

TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
Inside													
Miners, -----	2		2	1	4	3		2		2	1	1	13
Miners' laborers, -----	2		1		5	2				1	1	3	15
Drivers and runners, -----					1								2
Doorboys and helpers, -----		1							1		1		3
Company men, -----											1		1
All other employes, -----		2											2
Totals, -----	4	3	3	1	10	5	2	1	4	4	4	4	41
Outside													
Foremen, -----									1				1
Blacksmiths and carpenters, -----									1				1
Engineers and firemen, -----				1							1		2
Slatepickers (boys), -----											1		1
All other employes, -----		1								1			2
Totals, -----	1	1	1	1	1	1	2	2	3	3	3	4	7
Grand totals inside and outside, ---	4	4	3	2	10	5	2	3	4	7	4	4	48

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
Inside													
Miners, -----	3	1	2	1			1	2	4	1	1	3	19
Miners' laborers, -----	1	2		1	1	1	3	1	2	1	1	4	18
Drivers and runners, -----		1	1	1					2			1	6
Doorboys and helpers, -----		1			1	1		1					4
All other employes, -----			1			1	2			1	1		6
Totals, -----	4	5	4	3	2	3	6	4	8	3	3	8	53
Outside													
Slatepickers (boys), -----						1				1			2
All other employes, -----	1	2	1	1		2	1		1	1			10
Totals, -----	1	2	1	1	1	3	1	1	1	2	1	1	12
Grand totals inside and outside, ---	5	7	5	4	2	6	7	4	9	5	3	8	65

TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
American, -----	1	2			1	1			1		2		2
English, -----		1	1										1
Welsh, -----				1	1			1		1	1		5
German, -----									1				1
Polish, -----	3	1	2	1	6	2		1		2	3	4	25
Italian, -----						1			1				2
Slavonian, -----						1				1	1		3
Russian, -----					2								2
Totals, -----	4	4	3	2	10	5		2	3	4	7	4	48

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
American, -----	1	2	2	1	1	2		1	1	1	1		13
English, -----						1		1		1			3
Irish, -----										1			1
German, -----							1					1	2
Polish, -----	3	3	2	3	1	1	5	1	5	1	1	5	31
Hungarian, -----							1						3
Italian, -----			1							1			2
Slavonian, -----									1				1
Lithuanian, -----	1					1		1			1	2	6
Austrian, -----		1											1
Russian, -----		1											1
Swedish, -----						1							1
Totals, -----	5	7	5	4	2	6	7	4	9	5	3	8	65

TABLE I.—Operators and mines, kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents, and number of persons employed inside

Names of Operators and Mines	Kind of opening	Gaseous or non-gaseous	Method of ventilation	Diameter of fan in feet	Width of blades in feet	Depth of blades in feet	Number of revolutions per minute	Water gauge developed—in inches	Name of fan	Power used	Number of splits of air currents	Number of cubic feet of air per minute entering the mine at inlet	Total quantity of air per minute circulating in all the splits in cubic feet	Number of cubic feet per minute passing out at outlet	Number of persons employed inside	
Susquehanna Coal Co. Colliery No. 5:	Number 2, -----	Shaft, -----	Gaseous, -----	2 fans, -- 25	8	8	60	1.6	Gubal, -----	Steam, -----	6	119,000	82,000	123,000	304	
	Number 4, -----	Shaft, -----	Gaseous, -----	Fan, ----- 20	6	6	65	1.5	Gubal, -----	Steam, -----	2	55,000	39,000	57,000	144	
	Number 5, -----	Shaft, -----	Gaseous, -----	Fan, ----- 8	2	3	50	1.2	Sturdevant, -----	Steam, -----	4	30,000	24,000	31,000	88	
	Number 4, -----	Slope, -----	Gaseous, -----	4 fans, -- 16	4	6	75	1	Gubal, -----	Steam, -----	8	172,325	120,525	173,440	290	
	Number 29, -----	Tunnel, --	Non-gas.,	Natural, ----- 25	8	8	60	1.8	-----	-----	1	6,000	4,500	6,500	20	
	Number 1, -----	Drift, -----	Non-gas.,	Natural, ----- 25	8	8	60	1.8	-----	-----	1	10,500	7,000	10,500	25	
	Number 6, -----	Tunnel, --	Gaseous, -----	2 fans, -- 10	3	4	61	1.7	Gubal, -----	Steam, -----	6	44,000	38,000	45,000	170	
	Number 7, -----	Shaft, -----	Gaseous, -----	Fan, ----- 20	6	6	58	1	Gubal, -----	Steam, -----	5	180,224	175,653	186,828	299	
	Number 10, -----	Slope, -----	Gaseous, -----	Fan, ----- 25	8	8	58	.9	Gubal, -----	Steam, -----	4	85,000	82,500	85,000	214	
	Number 1, -----	Drift, -----	Non-gas.,	Fan, ----- 20	6	6	60	2	Gubal, -----	Steam, -----	4	85,000	82,500	85,000	214	
	Colliery Number 7:	Shaft, -----	Non-gas.,	Fan, ----- 5	2	3	175	1.5	Capel, -----	Electricity, -----	1	*	-----	-----	40	
	Number 1 South, -----	Shaft, -----	Gaseous, -----	Fan, ----- 25	8	8	60	1.6	Gubal, -----	Steam, -----	10	180,470	111,510	188,655	488	
	Number 1 North, -----	Shaft, -----	Gaseous, -----	2 fans, -- 25	6	6	72	1.5	Gubal, -----	Steam, -----	11	226,625	169,600	242,000	383	
					25	8	8	60	1.7							

*Broadcast.

Delaware, Lackawanna and Western Railroad Co.														
Anchinclos Colliery:														
Numbers 1 and 2, -----														
Bliss Colliery:														
Espy, -----														
Truesdale Colliery:														
Numbers 1 and 2, -----														
Mills, -----														
Truesdale, -----														
Number 5, -----														
Number 6, -----														
West End Coal Co.														
West End Colliery:														
Sand Drift, -----														
Fan, -----														
Number 1 Lee, -----														
Golden Drift, -----														
Barney Drift, -----														
Long Drift, -----														
Number 6, -----														
Lehigh and Wilkes-Barre Coal Co.														
Wanamie Colliery:														
Number 2, -----														
Number 3, -----														
Number 3, -----														
Potomac, -----														
Number 1, -----														
Number 1, -----														
Number 1, -----														
Slope, -----														
Alden Coal Co.														
Alden Colliery:														
Number 1, -----														
Number 2, -----														
Outside Slope, -----														
Shafts,-----	Gaseous,	Fan,-----	35	9.6	7.1	52	1.9	Guibal,-----	Steam,-----	10	129,725	108,400	134,550	466
Shaft,-----	Gaseous,	Fan,-----	35	9.2	9.1	45	1.5	Guibal,-----	Steam,-----	12	118,500	106,400	121,400	508
Tunnel,-----	Gaseous,	Fan,-----	24	2.7	2.7	120	1.4	Guibal,-----	Steam,-----	3	48,000	44,000	48,500	268
-----	-----	Fan,-----	24	4.3	8	-----	-----	Guibal,-----	-----	-----	-----	-----	-----	-----
Shafts,-----	Gaseous,	Fan,-----	27	7	5	40	.9	Guibal,-----	Steam,-----	6	121,700	99,000	128,000	305
Slope,-----	Gaseous,	Fan,-----	14	3.6	3	120	1.5	Open run-	Steam,-----	3	68,100	58,500	78,000	228
-----	-----	Fan,-----	12	3	5	70	1.2	ning.	Electricity,-----	4	34,600	29,000	35,000	32
Tunnel,-----	Non-gas,	Fan,-----	-----	-----	-----	-----	-----	Open run-	-----	-----	-----	-----	-----	-----
Slope,-----	Non-gas,	Natural,	-----	-----	-----	-----	-----	ning.	-----	-----	-----	-----	-----	6
Slope,-----	Non-gas,	Natural,	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	6
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Drift,-----	Non-gas,	Fan,-----	16	6	4	60	1.2	Guibal,-----	Steam,-----	3	41,300	39,500	42,000	179
Drift,-----	Gaseous,	Fan,-----	15	6	4	70	1.4	Guibal,-----	Electricity,-----	3	90,300	47,200	96,000	188
Drift,-----	Non-gas,	Fan,-----	16	6	4	70	1	Guibal,-----	Steam,-----	4	102,000	67,000	108,501	292
Drift,-----	Non-gas,	Fan,-----	20	6	6	80	1.4	Guibal,-----	Steam,-----	9	96,000	97,900	113,175	475
Drift,-----	Gaseous,	Fan,-----	16	6	4	75	.8	Guibal,-----	Steam,-----	1	-----	-----	-----	10
Slope,-----	Non-gas,	Natural,	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Slope,-----	Gaseous,	Fan,-----	24	8	6	70	1.9	Guibal,-----	Steam,-----	8	137,150	125,050	152,250	411
Slope,-----	Gaseous,	Fan,-----	25	8	6	70	1.5	Guibal,-----	Steam,-----	7	105,000	85,000	108,000	182
Drift,-----	Gaseous,	Fan,-----	7.5	3	2.5	100	.3	Guibal,-----	Steam,-----	1	32,630	20,000	33,170	25
Drift,-----	Gaseous,	Fan,-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	30
Drift,-----	Gaseous,	Fan,-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	26
Drift,-----	Non-gas,	Natural,	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	10
Slope,-----	Non-gas,	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Shaft,-----	Gaseous,	Fan,-----	15	5	5	82	1.8	Guibal,-----	Steam,-----	8	116,000	68,700	112,000	156
Shaft,-----	Gaseous,	Fans,-----	24	9	8.1	58	1	Guibal,-----	Steam,-----	14	149,000	125,000	162,000	295
-----	-----	Fans,-----	25	8	8	66	1.1	-----	-----	-----	-----	-----	-----	-----
Slope,-----	Gaseous,	Fan,-----	6	3	2	70	.5	-----	-----	-----	6,000	5,500	6,000	16

†Reserve.
*Broadcast.

TABLE 1.—Operators, location of collieries, railroads, etc.

Names of Operators and Collieries	County	Name of General Superintendent	Post Office	Name of Superintendent	Post Office	Railroad to Mine
Susquehanna Coal Co. Number 5, Number 6, Number 7,	Luzerne, -----	Robert A. Quin, --	Wilkes-Barre, -----	Francis H. Kohlbraker.	Nanticoke, -----	Pennsylvania
Delaware, Lackawanna and Western Railroad Co. Auchincloss, Truesdale,	Luzerne, -----	R. A. Phillips, ---	Scranton, -----	H. G. Davis, ----	Kingston, -----	D., L. and W.
West End Coal Co.	Luzerne, -----	H. H. Brady, Jr.,	Scranton, -----	H. A. Fillmore, ---	Shicksbiny, -----	Penna. and C. R. R. of N. J.
Lehigh and Wilkes-Barre Coal Co. Wanamie,	Luzerne, -----	C. F. Huber, -----	Wilkes-Barre, -----	{ W. H. Herring, outside. M. R. Morgans, inside. }	Wilkes-Barre, -----	C. R. R. of N. J.
Alden Coal Co. Alden,	Luzerne, -----	K. M. Smith, -----	Alden Station, -----	-----	-----	C. R. R. of N. J.

TABLE 2.—Number of tons of coal mined, number of days worked, number of persons employed, number killed and injured, quantity of powder and dynamite used, etc.

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Number of kegs of powder used	Number of pounds of dynamite used	Number of horses and mules
Susquehanna Coal Co.	Luzerne,	346,888	74,704	16,602	438,144	235	1,271	7	8	13,634	31,065	124
Number 5, -----		519,988	42,822	4,716	567,026	249	1,110	8	6	20,234	9,351	98
Number 6, -----		369,268	63,552	377	433,197	245	1,203	11	8	10,371	74,532	128
Number 7, -----		1,236,094	180,578	21,695	1,438,367	-----	3,584	26	22	44,239	114,968	350
Totals, -----		-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Delaware, Lackawanna and Western Railroad Co.	Luzerne,	186,378	20,501	5,692	212,481	206	591	2	3	3,498	8,189	39
Anchincloss, -----		400,289	25,772	2,046	428,107	225	927	4	2	12,628	9,630	62
Bliss, -----		838,252	19,082	327	837,651	253	711	4	7	13,901	27,171	40
Trusdale, -----		924,919	65,305	7,975	998,199	-----	2,229	10	12	30,027	44,990	141
Totals, -----		-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
West End Coal Co.	Luzerne,	649,463	40,400	9,081	698,944	266	1,459	9	12	16,707	231,264	72
West End Washery, -----		23,253	-----	-----	23,253	94	7	-----	-----	-----	-----	-----
Totals, -----		672,716	40,400	9,081	722,197	-----	1,466	9	12	16,707	231,264	72
Lehigh and Wilkes-Barre Coal Co.	Luzerne,	476,889	42,862	3,520	523,271	227	874	3	12	13,645	40,051	123
Wanamie, -----		-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Totals, -----		476,889	42,862	3,520	523,271	227	874	3	12	13,645	40,051	123
Alden Coal Co.	Luzerne,	298,399	21,068	7,135	326,627	236	680	-----	7	9,163	31,855	77
Grand totals, -----		3,609,017	350,238	49,406	4,008,661	-----	8,813	48	65	113,781	464,028	703

TABLE Z.—Part 2

Names of Operators	County	Number of Boilers				Locomotives			Number of steam engines of all classes	Total horse power	Number of pumps delivering water to surface	Capacity in gallons per minute	Quantity delivered to surface per minute—gallons.	Number of electric dynamos	Number of air compressors.	
		Cylindrical	Horse power	Tubular	Horse power	Total horse power	Steam	Air								Electric
Susquehanna Coal Co., ----- Delaware, Lackawanna and Western Railroad Co., ----- West End Co., ----- Leigh and Wilkes-Barre Coal Co., ----- Alden Coal Co., -----	Luzerne, -----	33	1,155	45	11,764	12,919	14	13	2	82	12,920	13	9,450	4,900	2	12
				21	3,284	3,284	1	-----	17	47	7,577	9	7,980	4,780	3	5
				11	2,400	2,400	5	-----	8	27	1,275	4	1,550	1,300	3	2
				10	1,666	1,666	3	-----	53	53	2,871	4	7,612	2,044	-----	-----
				8	1,535	1,535	2	-----	9	9	1,375	2	1,800	1,000	1	3
Totals, -----		83	1,155	95	20,649	21,804	25	13	27	218	26,018	32	28,392	14,024	9	22

Table 3.—Number of each class of employes inside and outside of mines

Names of Operators and Collieries	County	Inside										Outside								Grand total inside and outside		
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Doorboys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Foremen	Blacksmiths and carpenters	Fgniners and firemen	State pickers (boys),	State pickers (men),	Bookkeepers and clerks		All other employes	Total outside
Susquehanna Coal Co. Number 5, Number 6, Number 7, Totals,	Luzerne,	2	3	14	272	253	122	39	7	25	133	871	---	1	29	70	81	18	6	195	400	1,271
		1	3	7	255	214	119	2	4	28	110	743	1	1	23	49	86	---	6	202	367	1,110
		2	4	10	268	254	82	34	10	83	124	871	1	1	24	51	60	8	5	182	332	1,203
		5	10	31	795	721	323	75	21	137	367	2,485	1	3	76	170	227	26	17	579	1,099	3,584
Delaware, Lackawanna and Western Railroad Co. Auchincloss, Bliss, Truesdale, Totals,	Luzerne,	1	---	6	127	188	29	17	1	97	466	---	---	1	6	8	35	---	3	72	125	591
		1	1	7	230	306	58	15	3	147	768	---	---	1	11	13	30	3	3	98	159	927
		2	5	5	151	267	24	14	3	28	83	577	---	2	12	25	16	7	3	69	134	711
		4	1	18	508	761	111	46	7	272	83	1,811	---	4	29	46	81	10	9	239	418	2,229
West End Coal Co. West End, West End Washery, Totals,	Luzerne,	2	7	1	577	327	39	21	8	62	100	1,144	1	1	14	22	50	28	4	195	315	1,459
		2	7	1	577	327	39	21	8	62	100	1,144	1	1	14	22	50	28	4	202	322	1,466
		2	7	1	577	327	39	21	8	62	100	1,144	1	1	14	22	50	28	4	202	322	1,466

Table 3.—Continued

Names of Operators and Collieries	County	Inside											Outside								Grand total inside and outside	
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Doorboys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Foremen	Blacksmiths and carpenters	Engineers and firemen	State pickers (boys)	State pickers (men)	Bookkeepers and clerks	All other employes		Total outside
Lehigh and Wilkes-Barre Coal Co.	Luzerne, -----	1	2	6	275	205	71	36	6	83	---	685	---	1	7	23	56	14	4	84	189	---
Alden Coal Co.	Luzerne, -----	1	1	5	170	140	63	31	3	53	---	467	1	1	12	30	27	40	7	75	193	10
Grand totals, -----		13	21	61	2,325	2,154	607	209	45	607	1	6,592	3	10	138	291	441	118	41	1,179	2,221	13

TABLE 4.—Fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Mine	County	Nature and Cause of Accident in Brief
Jan. 8	Joseph Geafski, -----	American, ---	Laborer, -----	18	S.	---	---	No. 6 colliery, ----	---	Fatally injured by blast while assisting his miner in tamping a hole.
14	John Schwartz, -----	Polish, ----	Miner, -----	39	M.	1	5	No. 7 colliery, ----	---	Fatally injured by being struck on the head by a chain. He was standing at the top of a balance plane while a trip of cars was being run. The chain attached to the ascending cars broke and part of it remained on the rope, and when passing over the head of the plane John was struck by it.
20	Stanley Orbanski, -----	Polish, ----	Laborer, -----	26	M.	1	2	West End, -----	---	Instantly killed by fall of rock while cleaning up a fall on gangway road.
31	William Kolligofski -----	Polish, ----	Miner, -----	30	M.	1	2	No. 5 colliery, ----	---	Fatally burned by powder.
Feb. 3	John Hoffman, -----	American, ---	Coupler, -----	16	S.	---	---	No. 6 colliery, ----	Luzerne, -----	Found dead along gangway road. At about 9 o'clock in the morning he was ordered to go to No. 1 plane for a mule. When he did not return in the evening a search was made and his body was found on gangway road. At the inquest it developed that the probable cause of his death was gases from a locomotive that is used along this gangway for haulage purposes.
21	Edwin Wright, -----	English, ----	Timberman, ---	---	M.	1	5	No. 6 colliery, ----	---	Instantly killed. They were sitting at the foot of a balance plane when the runner at the head of said plane, in order to be ready to run when he received a signal from the bottom, dropped the car over the head. When the rope jerked the device pin broke and the car ran down the plane and caught both men.
21	George Kleish, -----	Polish, ----	Repairman, ---	---	M.	1	7	No. 6 colliery, ----	---	

Date	Name	Nationality	Occupation	Age	Sex	Count	Colliery	Location	Incident Description
Feb. 25	James Thompson	American	Pump runner	49	M.	1	West End	-----	Fatally injured. While on his way home from work he attempted to jump on a moving trip of mine cars and fell under the cars. Outside.
Mar. 2	Mike Poklada	Polish	Laborer	32	M.	1	No. 7 colliery	-----	Killed by fall of rock while working at face of gangway.
10	Andrew Coffy	Polish	Miner	43	M.	1	Wanamie	-----	Killed by fall of top coal at face of his working place.
23	Percy Clayworth	English	Miner	32	M.	1	No. 5 colliery	-----	Fatally injured by fall of top coal at face of his working place.
April 14	Thomas Ellswood	Welsh	Rock miner	33	M.	1	No. 5 colliery	-----	Fatally injured by an explosion of dynamite while tamping a hole.
27	Bolsh McLefski	Polish	Locomotive engineer	21	S.	-----	No. 6 colliery	-----	Fatally injured. While coming down a heavy grade with a trip of cars he lost control of the trip and when rounding a curve near the bottom the engine tipped over. Outside.
May 1	Adam Halesik	Russian	Laborer	23	S.	-----	No. 6 colliery	-----	Killed by fall of rock at face of his working place.
9	Charles Rabeck	Polish	Laborer	19	S.	-----	No. 5 colliery	-----	Killed by fall of rock near his working place while robbing pillars.
9	Jacob Hidoek	Polish	Laborer	27	S.	-----	Wanamie	-----	Killed by fall of rock at face of his working place.
11	Anthony Ostrofski	Polish	Miner	40	M.	1	No. 7 colliery	-----	Fatally burned by an explosion of gas.
11	John Mallick	Polish	Laborer	39	M.	1			
11	John Skonetzski	Polish	Miner	42	M.	1			
11	Mike Gorrel	Polish	Laborer	26	S.	-----			
21	William T. Evans	Welsh	Miner	59	M.	1			
25	Frank Ring	American	Runner	18	S.	-----	West End	-----	Killed by fall of top coal at the face of his chamber.
27	Anthony Grozlo	Russian	Miner	42	M.	1	Bliss	-----	Fatally injured. While gathering up a trip of cars along the gangway road he was squeezed between motor and door.
June 8	Peter Fruoni	Italian	Miner	30	M.	1	West End	-----	Fatally injured by fall of rock at the face of his working place.
16	Joe Karbinski	Polish	Laborer	32	M.	1	Truesdale	-----	Instantly killed. While going down the manway of his chamber, which pitched about 80 degrees, he fell to the bottom.
20	Costic Koshefski	Polish	Miner	34	S.	-----	West End	-----	Fatally injured. While his miner was tamping a hole with a drill containing dynamite the dynamite exploded and blew the drill out of the hole and into Karbinski's body.
22	Andrew Meholic	Slavonian	Laborer	50	M.	1	No. 5 colliery	-----	Fatally injured the squib he did not have sufficient time to get to a place of safety.
									Fatally injured at face of his working place while assisting in standing a prop.

Luzerne, -----

TABLE 4.—(continued)

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Mine	County	Nature and Cause of Accident in Brief
June 25	Lawrence Roberts, ---	American,---	Miner, -----	48	M.	1	---	Truesdale, -----		Killed by fall of rock at face of gangway. Fatally injured. He was preparing to fire a blast and while connecting the wire leading from the battery to those of the exploder the charge exploded. He used a touch battery and in investigating the accident one wire was found connected to one of the battery poles, while the other wire hung loosely around the second pole. The simple touching of the pole with this wire would be sufficient to explode the charge, as the battery used was of the storage type. Instantly killed. He charged two holes and ignited a squib in each hole and then retired to a place of safety. The laborer said they heard one squib miss fire and the miner then returned to the face, evidently forgetting about the second hole, which exploded as he reached the face. Fatally injured. While running ahead of a motor to open a door his light was extinguished and he was squeezed between motor and rib. Fatally injured. While at work at the top of the breaker the platform on which he was standing broke and he fell a distance of about 32 feet. Outside.
Aug. 4	John R. Williams, ---	Walsh, -----	Miner, -----	36	M.	1	3	Truesdale, -----		
19	William Desdofski, --	Polish, -----	Miner, -----	40	M.	1	4	Bliss, -----	Lucerne, -----	
Sept. 8	Frank Raffelo, -----	Italian, ----	Nipper, -----	18	S.	---	---	West End, -----		
14	Aaron Miller, -----	American,---	Carpenter, ---	62	M.	1	---	Wanamie, -----		

Sept. 18	Harry Domain, -----	German, ---	Slate boss, --	22	S. -----	No. 7 colliery, ---	Fatally injured. The breaker was stopped to repair part of the machinery and he went into a pair of rolls for the purpose, it is said, of cleaning away the coal, which he thought might block them. The person who strouped the breaker, having no knowledge of the dangerous position occupied by Domain signalled the engineer to start the breaker, and Domain was drawn into the rolls. Outside.
Oct. 22	Joe Moloneski, -----	Polish, ---	Runner, -----	19	S. -----	Auchincloss, -----	Instantly killed by fall of rock. He was running two cars down a run and was riding on the rear of the last car. When rounding a curve at the foot of the run the front car tipped to one side and displaced a few sets of timber, and the roof fell.
22	Stanley Clutz, -----	Polish, ---	Miner, -----	29	S. -----	Bliss, -----	Killed by fall of rock while working at the face of his chamber.
23	John Cerdizek, -----	Slavonian, ---	Miner, -----	40	S. -----	No. 7 colliery, ---	Fatally injured by premature blast. While tamping a hole with a drill the charge exploded.
23	David Jones, -----	Welsh, ---	Laborer, -----	45	S. -----	Truesdale, -----	Instantly killed. While opening a chamber on the gangway a piece of coal fell from the corner on him.
Nov. 2	John Simon, -----	Slavonian, ---	Comp. man, --	28	M. 1 2	No. 7 colliery, ---	Fatally injured. Kicked by a mule while taking the harness off.
5	William Griffith, -----	American, ---	Laborer, -----	17	S. -----	No. 5 colliery, ---	Fatally injured. In some unknown manner he fell into a scraper line. Outside.
11	Anthony Kulick, -----	Polish, ---	Laborer, -----	21	S. -----	Bliss, -----	Fatally injured by a fall of rock at face of his chamber.
13	Samulin Nicklin, -----	Welsh, ---	Fireman, -----	43	M. 1	No. 5 colliery, ---	Instantly killed by cars. He was riding to his work on the bumper of the engine with his feet resting on the bumper of the car. The draw bar of the engine pulled out and the engine and cars separated and he fell in front of the cars. Outside.
13	Harry Conrad, -----	American, ---	Nipper, -----	21	S. -----	West End, -----	Fatally injured by cars. While assisting in running a car down a chamber the car jumped the track and squeezed him against the rib.
16	Wadik Novak, -----	Polish, ---	Slatepicker, --	14	S. -----	No. 6 colliery, ---	Instantly killed. While reaching through the guard railing around an elevator line for the purpose of catching the coal as it was dumped from the buckets his arm was caught and he was drawn into the line. Outside.

Luzerne, -----

TABLE 4.—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Mine	County	Nature and Cause of Accident in Brief
Nov. 21	Peter Jovoloski, --	Polish, ---	Miner, -----	30	M. 1	3	3	West End, -----		Fatally injured by falling down a chamber pitching at 75 degrees, 110 feet long.
Dec. 10	Ignatz Mayka, ---	Polish, ---	Laborer, -----	29	M. 1	2	2	No. 7 colliery, -----		Killed by fall of rock at face of his chamber.
18	Wasil Lavondoski, .	Polish, ---	Laborer, -----	24	S. ---	---	---	No. 6 colliery, -----		Fatally injured. While assisting his miner to stand a prop at face of chamber the prop fell on him.
22	Anthony Zarubski, .	Polish, ---	Laborer, -----	30	S. ---	---	---	No. 7 colliery, -----	Luzerne, -----	Fatally injured by fall of rock in chamber while working on platform about 25 feet back from the face.
23	Joe Swingle, -----	Polish, ---	Miner, -----	30	S. ---	---	---	West End, -----		Fatally injured by falling down a chamber manway pitching 80 degrees, about 65 feet long.

TABLE 5.—Non-fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Mine	County	Nature and Cause of Accident in Brief
Jan. 4	Joe Rugas,	Lithuanian,	Miner,	40	M.	Wanamie,		Arm broken and body bruised by fall of rock at face of chamber.
11	Charles Sherman,	American,	Laborer,	20	S.	Wanamie,		Collar bone fractured. Squeezed between car and truck. Outside.
16	Frank Kologski,	Polish,	Laborer,	20	M.	No. 5 colliery,		Leg fractured and head bruised by fall of rock at face of chamber.
18	John Konopinski,	Polish,	Miner,	54	M.	No. 7 colliery,		Body injured by fall of rock at face of chamber.
30	Stanley Symazek,	Polish,	Miner,	44	M.	No. 7 colliery,		Leg fractured by air pipe bursting.
Feb. 4	Michael Simko,	Russian,	Miner,	36	M.	No. 6 colliery,		Leg broken by fall of coal at face of chamber.
7	Peter Symazek,	Polish,	Coupler,	17	S.	No. 7 colliery,		Kicked on forehead by a mule.
15	Patrick Finn,	American,	Brakeman,	19	S.	No. 6 colliery,		Rib broken and otherwise bruised by falling under cars. Outside.
21	John Reardon,	American,	Driver,	17	S.	No. 6 colliery,		Leg broken by cars on chamber road.
21	Fedosis Riddle,	Polish,	Laborer,	43	S.	West End,		Rib broken. Squeezed between car and rib.
26	Wasil Faydock,	Austrian,	Laborer,	32	S.	Truesdale,	Laizerne,	Hip dislocated. Squeezed between cars. Outside.
27	Frank Bratko,	Polish,	Laborer,	33	M.	Truesdale,		Thigh fractured by fall of coal at face of working place.
Mar. 11	Harry Wertman,	American,	Slope footman,	26	M.	No. 6 colliery,		Leg broken by car jumping the track and striking him.
11	John Gurras,	Polish,	Miner,	44	M.	West End,		Leg broken by fall of rock at face of chamber.
14	John Metz,	Polish,	Miner,	39	M.	Bliss,		Hip dislocated by fall of top coal at face of chamber.
19	John Wombelsdorf,	American,	Driver,	22	M.	Alden,		Hand squeezed between cars.
28	Joe Ross,	Italian,	Picker tender,	19	S.	West End,		Leg broken by being caught in moving bet. Outside.

TABLE 5.—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Mine	County	Nature and Cause of Accident in Brief
April 3	Herbert Kosch, -----	American, --	Runner and driver.	17	S.	No. 5 colliery, -----		Leg broken. Squeezed between car and mule.
4	Talley Rosperski, -----	Polish, ---	Miner, -----	42	M.	Wanamie, -----		Hands, face and arms burned by powder.
18	Waddie Krupentski, ---	Polish, ---	Laborer, -----	19	S.	West End, -----		Leg broken. Squeezed between car and platform.
27	Frank Kemski, -----	Polish, ---	Oiler, -----	16	S.	No. 6 colliery, -----		Leg crushed and head cut by cars. Outside.
May 2	Michael Dragon, -----	Polish, ---	Laborer, -----	26	S.	Truesdale, -----		Thigh bone fractured by cars.
5	John Faust, -----	American, --	Doorboy, -----	16	S.	Alden, -----		Collar bone broken. Squeezed between cars.
June 4	William Briggs, -----	American, --	Driver, -----	35	M.	Wanamie, -----		Kicked in abdomen by mule. Outside.
	Frank Stinecavage, -----	Lithuanian, --	Laborer, -----	55	S.	Wanamie, -----		Head and body cut by falling off a platform at foot of chamber.
16	George Crowe, -----	English, ---	Pipeman, -----	24	M.	No. 5 colliery, -----	Luzerne, -----	Leg broken by fall of rock along gangway road.
18	Adam Sokol, -----	Polish, ---	Patcher, -----	17	S.	Truesdale, -----		Skull fractured. Kicked by mule.
25	Fred Engle, -----	American, --	Slatepicker, -----	14	S.	Alden, -----		Leg fractured. Fell from breaker window. Outside.
July 27	Christian Peterson, ---	Swedish, ---	Watchman, -----	55	M.	Alden, -----		Fell and dislocated his arm. Outside.
14	Mike Medetski, -----	Polish, ---	Laborer, -----	39	S.	No. 7 colliery, -----		Leg broken by fall of top coal at face of chamber.
20	Fred Menge, -----	German, ---	Stableman, -----	49	M.	No. 5 colliery, -----		Collar bone dislocated. Squeezed between car and mule.
20	Victor Sbincofski, -----	Polish, ---	Laborer, -----	40	M.	No. 5 colliery, -----		Two ribs broken, face and head cut by cars. Outside.
28	Ignetz Dobrowalski, ---	Polish, ---	Timberman, -----	57	M.	No. 5 colliery, -----		Rib fractured by prop falling on him while standing it.
29	Mike Chercofski, -----	Polish, ---	Laborer, -----	42	S.	Auchincloss, -----		Body squeezed between car and door frame.
29	George Safner, -----	Hungarian, --	Laborer, -----	49	M.	West End, -----		Head cut and rib fractured by flying coal from blast.

July	30	Peter Seconda, -----	Polish, ---	Miner, ---	39	M.	Wanamie, -----	Burned by an explosion of powder while preparing a charge.
Aug.	1	Aaron Seigfreit, -----	American, --	Miner, ---	51	M.	West End, -----	Foot crushed and back injured by fall of rock at face of his chamber.
	12	Joe Zelowski, -----	Polish, ---	Laborer, ---	30	S.	Wanamie, -----	Head and back injured by falling down pitch chamber.
	13	James J. Watkins, -----	English, ---	Miner, ---	24	S.	No. 5 colliery, -----	Bone in foot broken by fall of rock in face of chamber.
	20	Fred Solvay, -----	Lithuanian, --	Patcher, ---	17	S.	Truesdale, -----	Wrist fractured. Squeezed between ear and door.
Sept.	10	Frank Yablouski, -----	Polish, ---	Miner, ---	27	M.	West End, -----	Skull and ribs fractured. Squeezed between ear and rib.
	15	Frank Koschak, -----	Hungarian, --	Driver, ---	21	S.	West End, -----	Body bruised. Squeezed between ear and rib.
	21	John Savinski, -----	Slavonian, --	Miner, ---	38	M.	Truesdale, -----	Head and back injured by premature blast.
	21	Frank Burns, -----	Polish, ---	Runner, ---	20	S.	Auchincloss, -----	Leg fractured by fall of rock at face of chamber.
	23	Ludwig Fitzlek, -----	Polish, ---	Laborer, ---	22	S.	Alden, -----	Leg fractured by fall of rock at face of chamber.
	24	Arthur Jones, -----	American, --	Jigman, ---	18	S.	Wanamie, -----	Leg broken. Struck by a shovel that was thrown with great force from sprocket wheel, Outside.
	25	Mike Terseavage, -----	Polish, ---	Miner, ---	25	S.	Wanamie, -----	Head and back bruised by falling down pitch chamber.
	28	Peter Stoek, -----	Polish, ---	Laborer, ---	31	S.	No. 7 colliery, -----	Face and body burned by powder. While opening a keg with an axe the powder exploded.
	30	Zigmond Sunda, -----	Hungarian, --	Miner, ---	41	M.	West End, -----	Face and hands cut by flying coal from a blast.
Oct.	9	William Beletski, -----	Polish, ---	Slatepicker, ---	16	S.	No. 6 colliery, -----	Leg broken by falling from chute to floor of breaker, a distance of 25 feet. Outside.
	17	Hugh McGeady, -----	American, --	Laborer, ---	21	S.	Wanamie, -----	Back injured by fall of rock at face of chamber.
	27	Frank B. Ross, -----	Italian, ---	Laborer, ---	19	S.	West End, -----	Leg broken by falling off ear. Outside.
	27	Frank Vardison, -----	English, ---	Miner, ---	52	M.	Alden, -----	Face and hands burned by gas at face of chamber.
	30	James Morrissy, -----	Irish, ---	Mason, ---	58	M.	Alden, -----	Leg broken by ears.
Nov.	4	Anthony Slowski, -----	Lithuanian, --	Miner, ---	35	M.	Truesdale, -----	Slightly burned by gas and bruised by falling at face of chamber.
	19	Anthony Karmick, -----	Polish, ---	Laborer, ---	20	S.	No. 7 colliery, -----	Face and hands burned by gas at face of chamber.
	27	Harry Owens, -----	American, --	Mine engineer, ---	23	S.	Wanamie, -----	Head cut and back injured by falling down a pitch chamber.
Dec.	7	Frank Yablorski, -----	Polish, ---	Miner, ---	38	M.	No. 5 colliery, -----	Two fingers cut off of right hand with an axe while making a wedge.
	7	Frank Ruscoski, -----	Polish, ---	Miner, ---	23	S.	West End, -----	Ribs fractured by fall of coal at face of chamber.

Luzerne,

TABLE 5.—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Mine	County	Nature and Cause of Accident in Brief
Dec. 10	Frank Whitecfski, -----	Polish, ----	Laborer, -----	23	S.	No. 7 colliery, -----		Leg broken by flying coal from premature blast.
12	Peter August, -----	Polish, ----	Laborer, -----	32	M.	No. 7 colliery, -----		Shoulder and side injured. Squeezed between car and door.
17	John Jander, -----	Lithuanian,	Laborer, -----	34	M.	West End, -----	Luzerne, -----	Arm broken by fall of coal at face of chamber.
19	William Butonis -----	Lithuanian,	Miner, -----	29	S.	Wanamie, -----		Arm broken by fall of coal at face of chamber.
23	John Shultz, -----	Polish, ----	Laborer, -----	45	M.	Bliss, -----		Knee fractured. Squeezed between cars.
24	Henry Shundifski, -----	German, ----	Runner, -----	17	S.	Auchincloss, -----		Back and hips bruised. Squeezed between car and rib.

EXPLOSION OF GAS AT No. 7 COLLIERY, SUSQUEHANNA COAL COMPANY

On May 11, Anthony Ostrofski, Polish, miner, John Mallick, Polish, laborer, John Skonetzski, Polish, miner, and Mike Gorrel, Polish, laborer, were fatally burned by an explosion of gas in the Hillman seam, North Shaft.

An inquest was held at Nanticoke on May 19 to inquire into the cause of the accident and the following verdict was rendered:

"We find that John Mallick came to his death on the 11th of May, 1908, at Nanticoke, from injuries received in an explosion of gas in No. 1 North Shaft, of the Susquehanna Coal Company. Mike Gorrel, John Skonetzski and Anthony Ostrofski died from injuries received at the same time and place and from the same cause. The explosion occurred in a cross-heading in said shaft about 9 o'clock in the morning. The evidence shows that the fire-boss visited the place at 5 o'clock on the morning of the accident and found no gas, but later a small amount accumulated owing to the removal of a quantity of coal that lay on the bottom of the roadway, which changed the air current somewhat. Further evidence shows that this gas was set on fire by the aforesaid John Skonetzski, who opened his safety lamp for the purpose of lighting his pipe. This act was not only reprehensible, but criminal. We find that the said company was in no way to blame for the accident.

JAMES HILL,
ISAAC EDWARDS,
WILLIAM J. GOODMAN,
JOHN D. WILLIAMS,
JACOB A. MORGAN,
GEORGE CLOTHIER."

Jurors.

CONDITION OF COLLIERIES

SUSQUEHANNA COAL COMPANY

Number 5 Colliery.—Ventilation good; roads and drainage fair, condition as to safety good.

Number 6 Colliery.—Ventilation fair; roads and drainage fair; condition as to safety good.

Number 7 Colliery.—Ventilation good; roads and drainage good; condition as to safety good.

DELAWARE, LACKAWANNA AND WESTERN RAILROAD COMPANY

Auchincloss Colliery.—Ventilation good; roads and drainage good; condition as to safety good.

Bliss Colliery.—Ventilation good; roads and drainage good; condition as to safety good.

Truesdale Colliery.—Ventilation good; roads and drainage fair; condition as to safety good.

WEST END COAL COMPANY

West End Colliery.—Ventilation good; roads and drainage fair; condition as to safety good.

LEHIGH AND WILKES-BARRE COAL COMPANY

Wanamie Colliery.—Ventilation good; roads and drainage good; condition as to safety good.

ALDEN COAL COMPANY

Alden Colliery.—Ventilation good, roads and drainage fair; condition as to safety good.

IMPROVEMENTS

SUSQUEHANNA COAL COMPANY

Colliery No. 5, Outside.—Installed a new fan to remove the dust from the breaker.

Addition to breaker and machinery.

Inside, No. 2 Shaft.—One new air locomotive.

No. 8 tunnel extended to connect No. 2 shaft with No. 4 slope, 182 yards.

New plane No. 6 in Ross seam.

New slope No. 20 in new lift in Ross seam, 148 yards.

No. 4 Slope.—New slope in Forge seam, 193 yards.

No. 4 Shaft.—Second opening for No. 3 slope, new slope No. 3, 141 yards.

Colliery No. 6, Outside.—Two new locomotives to haul coal from No. 7 shaft, No. 10 slope and No. 1 drift to the breaker.

Inside.—New electric haulage in No. 6 tunnel.

New engines for No. 1 plane in No. 7 shaft.

Tunnel Ross to Twin seams in No. 6 tunnel, 71 yards.

No. 11 slope in No. 7 shaft, 228 yards.

Colliery No. 7, Inside.—Two new air motors with air lines for No. 1 North shaft.

No. 17 plane in No. 15 tunnel, 100½ yards.

One new air motor for No. 3 shaft in South shaft No. 1.

New slope No. 23 West Ross in No. 1 South shaft, 205 1-3 yards.

New slope from head No. 12 plane to the Ross seam, in No. 1 South shaft, 228 yards.

DELAWARE, LACKAWANNA AND WESTERN RAILROAD COMPANY

Auchincloss Colliery.—During the year there has been erected and completed under the advice and direction of the United States Forestry Department, a chemical plant for the treatment of mine timbers to prevent decay. The plant has been in operation for some time.

This colliery closed down during the early part of the year to change the road gauge from 30 to 35 inches. By this change they are now permitted to use an entirely different motor in the locomotives and have been enabled to reduce the voltage in the trolley lines from 500 to 250 volts.

No. 1 hoisting engines have been equipped with the Nicholson overwinding device and will soon be in operation.

The new concrete and brick wash-house with metal lockers is about completed.

The work on the concrete and brick partition in No. 1 shaft separating the outlet and inlet airway is under way and will be completed early in the year 1909.

A Woodhouse chemical engine of 120 gallon capacity has been installed to be used for mine fires.

Bliss Colliery.—The general overhauling of the breaker was completed during the early part of the year and operation resumed with very satisfactory results.

A 200 H. P. electrically driven hoist was installed on No. 9 slope, Red Ash vein, to replace a small air hoist formerly used at this point.

The tunnel from Ross to Baltimore vein mentioned in my report for the year 1907 is now completed, and another 7 x 12 rock tunnel, on 15 degree pitch, has been driven from Ross to Baltimore vein for second opening and ventilation for the former tunnel. Work of connecting these two tunnels is now under way.

A rock tunnel 7 x 12 was also driven from Ross to Forge vein from what is known as Gorrigan gangway at the foot of Espy tunnel slope.

Truesdale Colliery.—The work of sinking Mills No. 5 slope to local basin, Mills vein has been completed and work of development is now going on.

No. 6 slope, which has been sunk on the Hillman vein, is being very rapidly developed and a 200 induction motor hoist has been installed in a brick and concrete building on this slope, which is now being sunk to a depth whereby the lifts East and West will be started from the same.

Other improvements: 60,000 gallon capacity reservoir; brick and concrete oil house with Bowser tank arrangement; wash house with expanded metal lockers; concrete and brick supply house; brick and concrete fire pump house; chemical engine house, and Woodhouse chemical engine of 120 gallon capacity.

The rock tunnel referred to in my last year's report from Ross to Ross vein through anticlinal to Red Ash vein has been completed.

Tunnel driven from Forge to Baltimore vein, No. 2 Shaft, has been completed.

A large opening has been driven from No. 1 East lift No. 1 Slope, to the surface, to increase the quantity of air entering this slope. This also reduces a large amount of work in connection with ice cutting on No. 1 Slope during the cold winter weather.

Several air bridges have also been erected to improve the ventilation.

WEST END COAL COMPANY

West End Colliery.—One 7 x 12 foot tunnel at Lee 200 feet long, from No. 3 to No. 2 vein.

One 7 x 12 foot tunnel, Sand drift, 275 feet long from Ross to Red Ash.

One 7 x 12 foot tunnel on No. 1 slope, Long drift, 400 feet long, through fault.

One 7 x 12 foot tunnel, Long drift, 100 feet long, Ross to Ross split.

One 5 x 5 foot drainage tunnel, in Sand drift basin, 500 feet; not finished.

The Red Ash vein was opened in the extreme west end of Pricilla Lee basin.

LEHIGH AND WILKES-BARRE COAL COMPANY.

Wanamie No. 18 Colliery, Inside.—No. 21 Tunnel, Bottom Red Ash to Top Red Ash.

No. 22 Tunnel, Bottom Red Ash to Top Red Ash.

No. 23 Tunnel, Bottom Red Ash to Top Red Ash.

ALDEN COAL COMPANY

Alden Colliery.—During the year a rock slope has been driven from the Bennett to the Red Ash vein, 740 feet. This slope will be the second opening for the lower workings in No. 2 shaft.

A 24,000 gallon concrete tank for hot water boiler feed has been erected at No. 2 shaft boiler house.

An Ames Multipolar generator has been installed for lighting the various buildings around the colliery.

A ten-foot fan has been put in the breaker for removing dust, and five spiral pickers have been added to the breaker equipment.

Eleventh District

LUZERNE AND CARBON COUNTIES

Hazleton, Pa., February 20, 1909.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor of transmitting herewith my annual report as Inspector of Mines of the Eleventh Anthracite District, for the year ending December 31, 1908.

Respectfully submitted,

DAVID J. RODERICK, Inspector.

SUMMARY OF STATISTICS

Number of collieries,	21
Number of mines,	57
Number of mines in operation,	55
Number of tons of coal shipped to market,	3,836,387
Number of tons used at mines for steam and heat,	682,804
Number of tons sold to local trade and used by employes,	130,288
Number of tons produced,	4,649,479
Number of tons produced by compressed air machines,..	—
Number of tons produced by electrical machines,	—
Number of persons employed inside of mines,	7,367
Number of persons employed outside,	3,903
Number of fatal accidents inside of mines,	38
Number of fatal accidents outside,	3
Number of non-fatal accidents inside of mines,	52
Number of non-fatal accidents outside,	30
Number of tons of coal produced per fatal accident inside, ..	122,355
Number of persons employed per fatal accident inside, ..	194
Number of persons employed per fatal accident outside,..	1,301
Number of persons employed per non-fatal accident inside, ..	142
Number of persons employed per non-fatal accident out- side,	130
Number of wives made widows,	20
Number of children orphaned,	35
Number of steam locomotives used inside of mines,	10
Number of steam locomotives used outside,	80
Number of compressed air locomotives used inside,	12
Number of electric motors used inside,	7
Number of fans in use,	38
Number of furnaces in use,	1
Number of gaseous mines in operation,	26
Number of non-gaseous mines in operation,	29
Number of old mines abandoned,	3

TABLE A

PRODUCTION OF COAL

Names of Operators	Tons
G. B. Markle and Company,	1,031,540
Coxe Brothers and Company, Incorporated,	770,754
Lehigh Valley Coal Company,	661,873
A. Pardee and Company,	502,353
Pardee Brothers and Company,	493,092
Harwood Coal Company,	249,358
Upper Lehigh Coal Company,	250,525
C. M. Dodson and Company,	278,889
Hazel Mountain Coal Company,	154,281
John S. Wentz and Company,	134,407
M. S. Kemmerer and Company,	103,293
Stauffer and Rowe,	8,296
Pond Creek Coal Company,	6,785
Thomas R. Reese and Son,	4,033

Total,	<u>4,649,479</u>
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Production by Counties

Luzerne,	4,524,445
Carbon,	125,034
Total,	<u>4,649,479</u>

TABLE I.—Fatal and non-fatal accidents inside and outside of mines; number of tons of coal produced per accident; number of persons employed; number employed per accident

Names of Operators	Fatal Accidents			Non-fatal Accidents			Tons of coal produced per fatal accident inside	Tons of coal produced per non-fatal accident inside	Number of employes inside	Number of employes outside	Total number of employes	Number of employes inside per fatal accident	Number of employes outside per fatal accident	Number of employes inside per non-fatal accident	Number of employes outside per non-fatal accident
	Inside	Outside	Total	Inside	Outside	Total									
G. B. Markle and Co.,	9		9	4	9	4	114,616	257,885	1,359	471	1,830	151	505	340	56
Coxe Brothers and Co., Inc.,	5	1	6	8	6	17	154,151	96,844	995	505	1,500	199	505	125	103
Lohgh Valley Coal Co.,	8		8	13	6	19	82,734	50,913	1,496	619	2,115	187	475	115	187
A. Pardee and Co.,	4	1	5	6	5	11	125,588	83,726	830	475	1,405	232	475	133	95
Pardee Brothers and Co.,	3		3	11	3	14	164,364	44,827	723	447	1,170	241	475	66	140
Harwood Coal Co.,	2		2	3	1	4	124,679	83,119	413	300	613	307	475	138	300
Upper J. High Coal Co.,	1		1	2	1	3	230,323	123,263	255	388	643	255	475	128	388
C. M. Bodson and Co.,	3		3	1	1	1	92,963	436	436	271	707	145	475	210	271
John S. Wentz and Co.,	1	1	2	1	1	1	134,407	67,204	210	139	409	210	139	98	87
Hazle Mountain Coal Co.,	1		1	3	2	5	154,281	51,427	294	173	467	234	173	98	87
M. S. Kemmerer and Co.,	1		1	2	2	3	103,233	103,233	139	97	236	139	97	139	49
Stauffer and Rowe,	1		1						21	10	31				
Pond Creek Coal Co.,									90	45	135				
Thomas R. Reese and Son,									6	3	9				
Totals and averages for district,	38	3	41	52	30	82	122,355	89,413	7,367	3,903	11,270	194	1,301	142	130

TABLE C.—Classification of Fatal Accidents Inside and Outside of Mines

	Months												Totals	Percentages
	January	February	March	April	May	June	July	August	September	October	November	December		
Causes of Accidents Inside														
Falls of coal, -----	1					6	2	1		1			11	28.95
Falls of slate, -----	1		1	1			1				1		6	15.79
Falls of roof, -----							1						2	5.26
Mine cars, -----		1	1	1		1		1	1	1			6	15.79
Explosions of powder and dynamite, -----								1					1	2.63
Premature blasts, -----	1			1	1			1	1	1	1		6	15.79
Falling into slopes, etc., -----				1				1					2	5.26
Miscellaneous, -----				2	1							1	4	10.53
Totals, -----	3	1	4	6	2	7	3	4	2	3	2	1	38	100.00
Causes of Accidents Outside														
Cars, -----	1												1	33.33
Machinery, -----										1			1	33.33
Miscellaneous, -----		1											1	33.34
Totals, -----	1	1										1	3	100.00
Grand totals inside and outside, -----	4	2	4	6	2	7	3	4	2	3	3	1	41	

TABLE D.—Classification of Non-fatal Accidents Inside and Outside of Mines

	Months												Totals	Percentages
	January	February	March	April	May	June	July	August	September	October	November	December		
Causes of Accidents Inside														
Falls of coal, -----	12			1		3	1		3		1		11	21.16
Falls of slate, -----	1		1	1		1	2		2		2		10	19.23
Mine cars, -----	1	2	2	1		2	1	1			1		11	21.16
Explosions of gas and dust, -----	1				1							2	4	7.69
Explosions of powder and dynamite, -----								1		1			2	3.84
Premature blasts, -----	2	2	2		1			1	1			1	9	17.31
Falling into slopes, etc., -----				1									1	1.92
Mules, -----								1					1	1.92
Miscellaneous, -----				1	1				1				3	5.77
Totals, -----	7	4	5	5	3	6	4	3	5	3	4	3	52	100.00
Causes of Accidents Outside														
Cars, -----	1		1	4	1	3	1	2					13	43.33
Machinery, -----	1		2	1	2		1						5	16.67
Miscellaneous, -----			1	2	2				4	2	1		12	40.00
Totals, -----	2		4	7	3	3	1	3	4	2	1		30	100.00
Grand totals inside and outside, -----	9	4	9	12	6	9	5	6	9	5	5	3	82	

TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
Inside													
Miners, -----			2	5	1	3	3	3	2	2	2		22
Miners' laborers, -----	3		1	1	1	3	1	1					10
Drivers and runners, -----		1	1	1									3
Doorboys and helpers, -----						1							1
All other employes, -----												1	1
Totals, -----	3	1	4	6	2	7	3	4	2	3	2	1	33
Outside													
All other employes, -----	1	1										1	3
Totals, -----	1	1										1	3
Grand totals inside and outside,--	4	2	4	6	2	7	3	4	2	3	2	1	41

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
Inside													
Miners, -----	4	3	4	2	2	4	2	3	5	3	1	3	36
Miners' laborers, -----	3		1	2	1	1	1				2	3	9
Drivers and runners, -----	1	1				1	1				1		5
All other employes, -----				1			1						2
Totals, -----	7	4	5	5	3	6	4	3	5	3	4	3	52
Outside													
Blacksmiths and carpenters, -----											1		1
Engineers and firemen, -----			2		2								4
Slatepickers (boys), -----	1												1
All other employes, -----	1		2	7	1	3	1	3	4	2			24
Totals, -----	2		4	7	3	3	1	3	4	2	1		30
Grand totals inside and outside,--	9	4	9	12	6	9	5	6	9	5	5	3	82

TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
American, -----	1		3	1	1		1			1	1	1	10
English, -----								1					1
Irish, -----									1				1
Polish, -----				4		1	1	1		2			9
Hungarian, -----	1	1				1		1					4
Italian, -----											1		1
Slavonian, -----		1		1	1	4	1	1					9
Lithuanian, -----											1		1
Austrian, -----			1						1				2
Russian, -----	1												1
Tyrolean, -----						1							1
Montenegrian, -----	1												1
Totals, -----	4	2	4	6	2	7	3	4	2	3	3	1	41

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
American, -----	2	1	4	5	3	1			2	2	2		22
English, -----		1					1						2
Irish, -----								1	1				2
German, -----						1	2						3
Polish, -----	3		3	1	1	4		2	2	1		2	19
Hungarian, -----	2		1	2		1	1		3	1			11
Italian, -----		2	1	2				2					7
Slavonian, -----	1			1			1	1		1	1		6
Lithuanian, -----									1				2
Austrian, -----				1	2	2					1	1	6
Russian, -----											1		1
Montenegrian, -----	1												1
Totals, -----	9	4	9	12	6	9	5	6	9	5	5	3	82

TABLE I.—Operators and mines, kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents, and number of persons employed inside

Names of Operators and Mines	Kind of opening	Gasous or non-gasous	Method of ventilation	Diameter of fan in feet	Width of blades in feet	Depth of blades in feet	Number of revolutions per minute	Water gauge developed—In inches	Name of fan	Power used	Area of furnace bars in square feet	Number of splits of air currents	Number of cubic feet of air per minute entering the mine at inlet	Total quantity of air per minute circulating in all the splits in cubic feet	Number of cubic feet per minute passing out at outlet	Number of persons employed inside				
G. B. Markle and Co. Jeddo No. 4 Colliery:	Slope, ---	Gasous,	Fan, ---	25	7.10	7.4	85	2.9	Guibal, ---	Steam, ---	---	9	164,000	123,000	173,000	477				
	Slope, ---	Gasous,	Fan, ---	16	4.6	4.9	75	.8									4	26,000	21,000	31,000	94
	Highland No. 5 Colliery:	Slope, ---	Gasous,	Fan, ---	16	4.6	4.9	85	1.2	Guibal, ---	Steam, ---	---	8	82,000	112,000	397				
Highland Nos. 1 and 2, ---	Slopes, ---	Gasous,	Fan, ---	16	4.10	4.10	70	7.7	8								98,000	88,000	100,000	318
Highland No. 6, ---	Slope, ---	Non-gas,	Fan, ---	16	4.6	4.9	65	.7	2								40,000	26,000	49,000	35
Core Brothers and Co., Inc. Drifton Colliery:	Slope, ---	Non-gas,	Fan, ---	16	4	4	60	---	Guibal, ---	Steam, ---	---	4	88,000	30,000	65,000	83				
	Slope, ---	Gasous,	Fan, ---	20	4	5.6	80	---									7	155,000	140,000	137,500	95
Eckley Colliery:	Slope, ---	Non-gas,	Natural,	---	---	---	---	---	---	---	---	---	6,300	6,200	6,500	4				
	Slope, ---	Non-gas,	Natural,	---	---	---	---	---	---	---	---	---	26,000	17,000	25,500	6				
	Slope, ---	Non-gas,	Natural,	---	---	---	---	---	---	---	---	---	25,000	24,000	25,500	22				
	Slope, ---	Non-gas,	Natural,	---	---	---	---	---	---	---	---	---	---	---	---	---				
	Slope, ---	Non-gas,	Natural,	---	---	---	---	---	---	---	---	---	---	---	---	---				
	Slope, ---	Non-gas,	Natural,	---	---	---	---	---	---	---	---	---	---	---	---	---				
Buck Mountain No. 11, ---	Slope, ---	Non-gas,	Natural,	---	---	---	---	---	---	---	---	---	17,190	12,000	19,000	44				
Stockton, ---	Slope, ---	Non-gas,	Natural,	---	---	---	---	---	---	---	---	---	16,600	16,000	17,000	63				

Deringer Colliery:													
Drift, ---	Gasous,	Fall, ---	20	6	5.6	90	---	Steam,	Guibal, ---	59,470	53,100	70,200	105
Deringer,	Non-gas,	Burnare,	16	4	4	100	14	Steam,	Guibal, ---	18,200	10,000	19,000	46
Tombaken,	Gasous,	Fan, ---	20	7	6	95	---	Steam,	Guibal, ---	64,893	38,000	68,480	98
Gowen Nos. 1 and 3,	Gasous,	Fan, ---	20	7	6	95	---	Steam,	Guibal, ---	52,300	31,400	61,000	61
Gowen No. 4,	Gasous,	Fan, ---	20	7	6	95	---	Steam,	Guibal, ---	---	---	---	---
Lehigh Valley Coal Co.													
Hazleton Shaft,	Gasous,	Fan, ---	20	7	6	65	.55	Steam,	Guibal, ---	114,400	78,500	134,200	225
Hazleton No. 1,	Gasous,	Fan, ---	17	5	6	65	.50	Steam,	Guibal, ---	39,000	19,400	42,200	94
Hazleton No. 3,	Gasous,	Fan, ---	14	4	4	98	.55	Steam,	Guibal, ---	52,500	43,000	60,500	215
Hazleton No. 5,	Non-gas,	Fan, ---	20	6	6	62	.80	Steam,	Guibal, ---	109,715	41,200	112,450	136
Stoekton No. 2,*	Gasous,	Fan, ---	16	4	4.6	50	.65	Steam,	Guibal, ---	49,489	22,915	51,221	95
Hazleton No. 1 Colliery:													
Hazleton No. 1,	Gasous,	Fan, ---	16	4	4	60	.30	Steam,	Guibal, ---	38,300	24,000	40,500	85
Hazleton No. 8,	Gasous,	Fan, ---	14	4	4	70	.30	Steam,	Guibal, ---	38,000	27,500	39,000	84
Spring Brook Colliery:													
Spring Brook No. 1,	Gasous,	Fan, ---	16	4	4	71	.9	Steam,	Guibal, ---	74,437	59,800	78,188	294
Spring Brook No. 2,	Gasous,	Fan, ---	16	4	4.9	60	.7	Steam,	Guibal, ---	57,500	35,000	62,500	134
A. Pardee and Co.													
Cranberry Colliery:	Gasous,	Fan, ---	16	4	4	80	.4	Steam,	Guibal, ---	80,000	25,000	81,000	102
Cranberry No. 1,	Gasous,	Fan, ---	16	4	4.10	72	.8	Steam,	Guibal, ---	48,797	20,000	49,673	66
Cranberry No. 4,	Gasous,	Fan, ---	16	4	4.6	60	.8	Steam,	Guibal, ---	38,350	24,000	38,420	82
Cranberry No. 5,	Non-gas,	Fan, ---	16	4	4.6	60	.8	Steam,	Guibal, ---	---	---	---	---
Cranberry No. 6,	Non-gas,	Fan, ---	16	4	4.6	60	.8	Steam,	Guibal, ---	---	---	---	---
East Crystal Ridge,													
Pardee Brothers and Co.													
Lattimer Colliery:	Gasous,	Fan, ---	16	4.6	4.3	66	1.3	Steam,	Guibal, ---	75,000	65,000	77,750	300
Lattimer No. 1,	Gasous,	Fan, ---	16	4.6	4.3	66	1.3	Steam,	Guibal, ---	60,000	46,000	63,000	200
Lattimer No. 2,	Gasous,	Fan, ---	16	4.6	4.3	66	1.3	Steam,	Guibal, ---	45,000	40,000	67,250	100
Lattimer No. 5,	Gasous,	Fan, ---	5	2.6	2	180	2	Steam,	Guibal, ---	20,000	14,000	20,800	63
Lattimer No. 9,	Non-gas,	Fan, ---	16	4.6	4.3	72	.2	Steam,	Guibal, ---	70,500	40,000	72,000	175
Lattimer No. 20,	Non-gas,	Fan, ---	16	4.6	4.3	72	.1	Steam,	Guibal, ---	60,000	41,000	65,000	185
Harwood Coal Co.													
Harwood Colliery:	Gasous,	Fan, ---	16	4.6	4.3	72	.2	Steam,	Guibal, ---	25,000	16,000	26,000	53
Harwood No. 5,	Non-gas,	Fan, ---	16	4.6	4.3	72	.2	Steam,	Guibal, ---	---	---	---	---
Harwood No. 30,	Non-gas,	Fan, ---	16	4.6	4.3	72	.2	Steam,	Guibal, ---	---	---	---	---
Harwood No. 30,	Non-gas,	Fan, ---	16	4.6	4.3	72	.2	Steam,	Guibal, ---	---	---	---	---
C. M. Dodson and Co.													
Beaver Brook Colliery:	Gasous,	Fan, ---	16	4.6	5	90	---	Steam,	Guibal, ---	46,000	35,000	58,500	162
Beaver Brook No. 10,	Gasous,	Fan, ---	16	4.6	5	80	---	Steam,	Guibal, ---	67,000	58,000	75,000	203
Beaver Brook No. 11,	Gasous,	Fan, ---	16	4.6	5	80	---	Steam,	Guibal, ---	30,500	25,000	31,000	113
Beaver Brook No. 15,	Gasous,	Fan, ---	16	4.6	5	90	---	Steam,	Guibal, ---	---	---	---	---

*Idle.

TABLE I.—Continued

Names of Operators and Mines	Kind of opening	Gasous or non-gasous	Method of ventilation	Diameter of fan in feet	Width of blades in feet	Depth of blades in feet	Number of revolutions per minute	Water gauge developed—in inches	Name of fan	Power used	Area of furnace bars in square feet	Number of splits of air currents	Number of cubic feet of air per minute entering the mine at inlet	Total quantity of air per minute circulating in all the splits in cubic feet	Number of cubic feet per minute passing out at outlet	Number of persons employed inside
Hazle Mountain Coal Co.	Slope, ---	Non-gas, ---	Fan, -----	16	6	4.6	72	1.3	Gubbal, ---	Steam, ---	---	3	48,400	32,050	48,500	154
Hazle Mountain Colliery:	Slope, ---	Non-gas, ---	Fan, -----	16	4	3.11	85	1.4	Gubbal, ---	Steam, ---	---	---	50,000	46,930	51,000	140
Hazle Mountain No. 1, -----																
Hazle Mountain No. 5, -----																
John S. Wentz and Co.	Slope, ---	Non-gas, ---	Natural, -----													
Hazle Brook Colliery:	Slope, ---	Non-gas, ---	Natural, -----													
Hazle Brook No. 3, -----																
Hazle Brook No. 5, -----																
Hazle Brook No. 6, -----																
Hazle Brook No. 8, -----																
Upper Lehigh Coal Co.	Slope, ---	Non-gas, ---	Natural, -----													
Upper Lehigh Colliery,† -----																
M. S. Kemmerer and Co.	Slope, ---	Non-gas, ---	Natural, -----													
Sandy Run Colliery,† -----																
Stauffer and Rowe	Slope, ---	Non-gas, ---	Natural, -----													
Rowe Colliery,† -----																

†Robbing; no air measurements taken.

TABLE 1.—Operators, location of collieries, railroads, etc.

Names of Operators and Collieries	County	Name of General Superintendent	Post Office	Name of Superintendent	Post Office	Railroad to Mine
G. B. Markle and Co. Jeddo No. 4 and Ebervale, Highland No. 5, Highland Nos. 1, 2 and 6,	Luzerne,	John Markle,	Jeddo,	J. T. Keith,	Jeddo,	Lehigh Valley
Coxe Brothers and Co., Inc. Drifton Nos. 1 and 2, Deringer, Gowen and Tomshick- en, Eckley, Buek Mountain and Stockton.	Luzerne,	S. D. Warriner,	Wilkes-Barre,	W. H. Davies,	Hazleton,	Lehigh Valley
Lehigh Valley Coal Co. Hazleton Shaft, Hazleton No. 1, Spring Brook, Spring Mountain,	Luzerne, Luzerne, Carbon, Luzerne,	S. D. Warriner,	Wilkes-Barre,	W. H. Davies,	Hazleton,	Lehigh Valley
A. Pardee and Co. Granberry,	Luzerne,	Frank Pardee,	Hazleton,			Lehigh Valley
Pardee Brothers and Co. Lattimer,	Luzerne,	A. W. Drake,	Lattimer Mines,	Geo. W. Barager,	Lattimer Mines,	Lehigh Valley
Harwood Coal Co. Harwood,	Luzerne,	A. W. Drake,	Lattimer Mines,	Geo. W. Barager,	Lattimer Mines,	Lehigh Valley
Upper Lehigh Coal Co. Upper Lehigh,	Luzerne,	A. C. Leisenring,	Upper Lehigh,			C. R. R. of N. J.
C. M. Dodson and Co. Beaver Brook,	Luzerne,			John J. Turnbach,	Audenreid,	L. V. and C. R. R. of N. J.
Hazle Mountain Coal Co. Hazle Mountain,	Luzerne,	W. R. McTurk,	Pennsylvania Bldg., Phila.	W. A. Fuller,	Hazleton,	Lehigh Valley

John S. Wentz and Co. Hazle Brook, -----	Luzerne, -----	-----	-----	John Weber, -----	Hazle Brook, -----	Lehigh Valley
M. S. Kemmerer and Co. Sandy Run, -----	Luzerne, -----	M. S. Kemmerer, -----	Upper Lehigh, -----	George Kugler, -----	Sandy Run, -----	C. R. R. of N. J.
Stauffer and Rowe Rowe, -----	Luzerne, -----	James Rowe, -----	Hazleton, -----	-----	-----	Lehigh Valley
Pond Creek Coal Co. Pond Creek, -----	Luzerne, -----	W. G. Thomas, -----	Hazleton, -----	I. D. Thomas, -----	Zehner, -----	C. R. R. of N. J.
Thomas R. Reese and Son Dusky Diamond, -----	Luzerne, -----	Thos. R. Reese, -----	Audenreid, -----	-----	-----	L. V. and C. R. R. of N. J.
Black Creek Coal Co. Harleigh,* -----	Luzerne, -----	-----	-----	-----	-----	-----

*Idle.

TABLE 2.—Number of tons of coal mined, number of days worked, number of persons employed, number killed and injured, quantity of powder and dynamite used, etc.

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Number of kegs of powder used	Number of pounds of dynamite used	Number of horses and mules
G. B. Markle and Co.												
Jeddo No. 4 and Ebervale, -----	} Luzerne, -----	349,777	45,384	1,977	397,138	160	762	3	1	1,627	163,134	113
Highland No. 5, -----		297,392	26,352	-----	323,744	182	556	5	2	5,893	86,067	75
Highland Nos. 1, 2 and 6, -----		259,518	53,556	6,584	310,658	245	512	1	1	1,110	91,955	74
Totals, -----		897,687	125,292	8,561	1,031,540	-----	1,830	9	4	8,630	341,156	262
Coxe Brothers and Co., Inc.												
Drifton Nos. 1 and 2, -----	} Luzerne, -----	268,745	88,645	4,334	361,724	202	549	4	6	4,356	36,000	59
Deringer, Cowen and Tompkinson, -----		177,234	38,143	4,335	219,712	202	590	2	8	3,895	30,350	74
Lekley, Buck Mountain and Stockton, -----		159,856	28,868	594	189,318	201	391	-----	3	1,818	33,976	48
Totals, -----		605,835	155,656	9,263	770,754	-----	1,500	6	17	10,069	100,926	181
Lehigh Valley Coal Co.												
Hazleton Shaft, -----	} Luzerne, -----	216,126	104,048	15,159	335,333	180	865	4	12	6,614	109,050	45
Hazleton No. 1, -----		144,807	17,445	39,254	201,506	155	663	3	1	4,054	58,897	48
Spring Brook, -----		110,046	13,303	1,685	125,034	181	587	1	6	2,973	36,858	55
Totals, -----	Carbon, -----	470,979	134,796	56,098	661,873	-----	2,115	8	19	13,641	204,805	148
A. Pardee and Co.												
Cranberry, -----	Luzerne, -----	430,844	65,160	6,349	502,353	194	1,405	5	11	9,254	150,250	214

Lattimer, ----- Pardee Brothers and Co.	415,894	58,000	19,098	493,092	235	1,170	3	14	1,582	284,497	115
Harwood, ----- Harwood Coal Co.	200,325	36,000	13,033	249,358	223	613	2	4	1,575	83,855	70
Upper Lehigh, ----- Upper Lehigh Coal Co.	215,592	28,143	6,790	250,525	242	643	1	3	1,982	71,735	86
Beaver Brook, ----- C. M. Dodson and Co.	248,027	30,146	716	278,889	243	707	3	1	6,724	39,425	59
Hazle Mountain, ----- Hazle Mountain Coal Co.	134,904	18,250	1,127	154,281	243	467	1	5	2,300	33,100	37
Hazle Brook, ----- John S. Wentz and Co.	113,626	19,867	914	134,407	237	409	2	1	421	62,675	39
Sandy Run, ----- M. S. Kemmerer and Co.	92,327	8,274	2,692	103,293	238	236	1	3	1,083	16,750	19
Rowe, ----- Stauffer and Rowe	5,294	520	2,482	8,296	284	31	---	---	220	200	8
Pond Creek, ----- Pond Creek Coal Co.	4,230	2,500	55	6,785	21	135	---	---	50	4,500	13
Dusky Diamond, ----- Thomas R. Reese and Son	723	200	3,110	4,033	241	9	---	---	195	300	2
Grand totals, -----	3,836,387	682,804	130,288	4,649,479	---	11,270	41	82	57,733	1,393,674	1,250

TABLE 2.—Part 2

Names of Operators	County	Number of Boilers			Locomotives			Total horse power	Number of steam engines of all classes	Total horse power	Number of pumps delivering water to surface	Capacity in gallons per minute	Quantity delivered to surface per minute—gallons	Number of electric dynamos	Number of air compressors
		Cylindrical	Tubular	Horse power	Steam	Air	Electric								
G. B. Markle and Co.,	Luzerne,	9	56	9,470	12	6	1	91	8,246	10	11,878	11,878	8	8	
Coxe Brothers and Co., Inc.,	Luzerne,	330	49	9,375	16	6	1	58	5,470	19	15,700	8,675	1	4	
Lehigh Valley Coal Co.,	Luzerne and Carbon.	20	46	7,800	13	6	4	72	7,175	19	14,100	8,100	2	4	
A. Pardee and Co.,		25	18	5,045	12			68	18,980	15	23,100	7,600		1	
Pardee Brothers and Co.,			12	2,900	11		2	28	3,475	6	7,300	3,800	2	3	
Harwood Coal Co.,			12	1,800	4			29	1,325	6	13,500	5,900	1	1	
Upper Lehigh Coal Co.,		50	17	2,400	8			51	1,225	12	13,500	5,900	1	1	
C. M. Dodson and Co.,		4	25	3,280	1			28	1,400	8	10,640	5,100			
Hazle Mountain Coal Co.,	Luzerne,		9	1,330	4			7	600	4	3,800	1,600		2	
John S. Wentz and Co.,			12	1,675	7			15	600	4	4,500	3,000		1	
M. S. Kemmerer and Co.,		6	2	200	1			10	425	1	3,000	1,000			
Stauffer and Rowe,			2	60				3	50						
Pond Creek Coal Co.,			7	900	1			6	185	3	1,363	895		1	
Thomas R. Reese and Son,			1	90				1	25						
Totals,		114	268	46,385	90	12	7	467	48,481	101	109,381	57,208	10	26	

*Jeddo Tunnel drainage.

Table 3.—Continued

Names of Operators and Collieries	County	Inside										Outside							Grand total inside and outside			
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Doorboys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Foremen	Blacksmiths and carpenters	Engineers and firemen	State pickers (boys)	State pickers (men)		Bookkeepers and clerks	All other employes	Total outside
A. Pardee and Co. Cranberry, -----	Luzerne, -----	4	4	7	377	290	70	46	13	62	57	930	---	2	52	54	52	39	4	272	475	1,405
Pardee Brothers and Co. Lattimer, -----	Luzerne, -----	2	12	1	370	155	50	3	---	58	72	723	3	4	24	45	40	26	10	286	447	1,170
Harwood Coal Co. Harwood, -----	Luzerne, -----	1	5	1	163	132	35	---	7	29	40	413	3	1	16	30	18	7	6	119	200	613
Upper Lehigh Coal Co. Upper Lehigh, -----	Luzerne, -----	2	3	---	115	78	35	4	6	10	2	255	1	6	11	32	68	66	3	201	388	643
C. M. Dodson and Co. Beaver Brook, -----	Luzerne, -----	1	2	2	165	164	37	8	5	21	30	496	1	1	21	32	45	16	4	151	271	707
Hazle Mountain Coal Co. Hazle Mountain, -----	Luzerne, -----	1	2	---	137	95	24	3	4	28	---	294	1	2	14	18	38	17	3	80	173	467
John S. Wentz and Co. Hazle Brook, -----	Luzerne, -----	1	3	---	92	35	16	---	5	58	---	210	---	2	12	26	28	14	2	115	199	409
M. S. Kemmerer and Co. Sandy Run, -----	Luzerne, -----	1	---	---	58	53	12	2	2	11	---	139	1	1	4	10	28	38	1	14	97	236

TABLE 3.—Part 2

Names of Operators and Collieries	County	Number of Days Worked in Breaker												Total
		January	February	March	April	May	June	July	August	September	October	November	December	
G. B. Markle and Co. Jeddo No. 4 and Ebervale, ----- Highland No. 5, ----- Highland Nos. 1, 2 and 6, -----	Luzerne, -----	15 15 23	12 11 16	15 11 21	13 12 20	15 16 22	14 15 22	13 15 22	11 13 14	12 17 21	14 19 23	13 17 20	13 18 21	160 183 245
Coxe Brothers and Co., Inc. Driftton Nos. 1 and 2, ----- Devinger, Gowen and Tomhicken, ----- Eckley, Buck Mountain and Stockton, -----	Luzerne, -----	23 22 22	16 15 17	9 9 8	22 22 21	21 22 21	23 22 23	11 12 11	12 16 12	16 16 16	16 16 16	17 18 18	16 15 16	202 202 201
Lehigh Valley Coal Co. Hazleton Shaft, ----- Hazleton No. 1, ----- Spring Brook, -----	Luzerne, Luzerne, Carbon, -----	20 20	14 14	9 10	19 19	19 19	20 19	10 10	10 12 11	14 16 14	15 17 15	16 17 15	14 15 181	180 185 181
A. Pardee and Co. Cranberry, -----	Luzerne, -----	22	14	10	21	21	21	11	12	15	14	18	15	194
Pardee Brothers and Co. Lattimer, -----	Luzerne, -----	23	17	16	21	22	22	15	18	23	22	14	22	235
Harwood Coal Co. Harwood, -----	Luzerne, -----	21	17	10	21	21	21	11	14	22	22	22	20	223
Upper Lehigh Coal Co. Upper Lehigh, -----	Luzerne, -----	21	18	20	21	19	19	19	18	21	22	21	23	242
C. M. Dodson and Co. Beaver Brook, -----	Luzerne, -----	20	19	20	22	22	23	23	17	16	17	21	23	243

Hazle Mountain, -----	Hazle Mountain Coal Co.	24	20	23	21	20	20	17	19	19	21	20	19	243
Hazle Brook, -----	John S. Wentz and Co.	19	17	18	18	19	20	21	21	20	23	21	20	237
Sandy Run, -----	M. S. Kemmerer and Co.	21	19	21	20	20	20	21	19	19	20	19	19	238
Rowe, -----	Stauffer and Rowe	24	23	24	22	21	23	25	25	24	24	25	24	284
Pond Creek, -----	Pond Creek Coal Co.	11	8	2										21
Dusky Diamond, -----	Thomas R. Reese and Son	24	21	23			18	26	26	26	27	24	26	241

TABLE 4.—Fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Mine	County	Nature and Cause of Accident in Brief
Jan. 7	George Goblowsky, ---	Hungarian, ---	Laborer, ---	39	S.	---	---	Jeddo No. 4, ---	---	Instantly killed by fall of slate in gangway.
8	Carl Bertcosky, ---	Russian, ---	Laborer, ---	35	M.	1	2	Cranberry, ---	---	Instantly killed under body of dump car. Outside.
8	John Gerovish, ---	Montenegrian, ---	Laborer, ---	27	S.	---	---	Tonhicken, ---	---	Instantly killed by blast in sinking slope.
18	George Fritzhiget, ---	American, ---	Laborer, ---	25	S.	---	---	Lattimer, ---	---	Instantly killed by fall of coal in breast.
Feb. 13	Andrew Rentko, ---	Hungarian, ---	Oiler, ---	18	S.	---	---	Hazle Brook, ---	---	Instantly killed by falling in breaker. Outside.
20	Andrew Berish, ---	Slavonian, ---	Driver, ---	18	S.	---	---	Upper Lehigh, ---	---	Instantly killed by being run over by cars on gangway.
Mar. 11	Charles Rodden, ---	American, ---	Driver, ---	24	S.	---	---	Cranberry, ---	---	Instantly killed by being run over by cars on gangway.
11	Peter Gentilini, ---	Austrian, ---	Miner, ---	27	S.	---	---	Drifton No. 2, ---	---	Instantly killed by fall of roof in breast.
18	Henry Krans, ---	American, ---	Miner, ---	50	M.	1	---	Hazleton No. 1, ---	---	Instantly killed by fall of slate on gangway.
18	Howard Nelms, ---	American, ---	Laborer, ---	31	M.	1	2	Hazleton No. 1, ---	Luzerne, ---	Instantly killed by fall of slate on gangway.
April 4	Mike Tokash, ---	Polish, ---	Miner, ---	45	M.	1	5	Highland No. 5, ---	---	Suffocated by rush of mud and water into breast.
14	John Wasenie, ---	Polish, ---	Miner, ---	26	S.	---	---	Highland No. 5, ---	---	Fatally injured by blast in cross-cut of breast.
14	Anthony Skingie, ---	Polish, ---	Miner, ---	54	M.	1	---	Cranberry, ---	---	Fatally injured by being run over by cars on gangway.
18	Samuel Hodgson, ---	American, ---	Driver, ---	22	S.	---	---	Cranberry, ---	---	Fatally injured by falling down breast manway.
28	George Kosco, ---	Slavonian, ---	Miner, ---	46	M.	1	5	Lattimer, ---	---	Instantly killed by fall of slate in breast.
29	John Kowalskei, ---	Polish, ---	Miner, ---	32	M.	1	3	Hazleton shaft, ---	---	Fatally injured by blast in breast.
May 5	John Bijel, ---	Slavonian, ---	Miner, ---	28	M.	1	1	Hazleton shaft, ---	---	Suffocated by rush of mud into breast.
16	Conrad Pirrom, ---	American, ---	Laborer, ---	33	S.	---	---	Cranberry, ---	---	Instantly killed by fall of coal in breast.
June 3	John Marushock, ---	Polish, ---	Laborer, ---	29	M.	1	1	Spring Brook, ---	Carbon, ---	Fatally injured by fall of coal in breast.
4	John Kukatska, ---	Slavonian, ---	Laborer, ---	38	S.	---	---	Beaver Brook, ---	---	Fatally injured by fall of coal in breast.
10	Mike Volk, ---	Slavonian, ---	Laborer, ---	39	M.	1	1	Harwood, ---	---	Instantly killed by fall of coal in gangway.
12	Mike Surlinskie, ---	Slavonian, ---	Miner, ---	26	M.	1	1	Hazleton No. 1, ---	Luzerne, ---	Instantly killed by fall of coal in breast.

June 15	Albert Tenapilla, ----	Tyrolean, ----	Doorboy, ----	17	S.	---	---	Hazleton shaft, ---	Instantly killed by motor running over him on gangway.
25	Joseph Zamborskie, --	Hungarian, ----	Miner, ----	30	M.	1	2	Highland No. 2, ---	Instantly killed by fall of coal on gangway.
25	Mike Clebon, ----	Slavonian, ----	Miner, ----	38	M.	1	3	Jeddo No. 4, ----	Fatally injured by fall of coal on gangway.
July 22	Moses Kamezel, ----	American, ----	Miner, ----	37	M.	1	---	Deringer, ----	Instantly killed by fall of coal in breast.
24	Stanley Voka, ----	Slavonian, ----	Laborer, ----	24	S.	---	---	Hazle Brook, ----	Fatally injured by fall of slate on gangway.
27	Stanley Koba, ----	Polish, ----	Miner, ----	28	M.	1	---	Highland No. 5, ---	Fatally injured by fall of coal in robbing pillars.
Aug. 5	Harry Wastesin, ----	Hungarian, ----	Miner, ----	34	M.	1	4	Hazleton shaft, ---	Fatally injured by falling down breast manway.
22	John Reaper, ----	Slavonian, ----	Miner, ----	38	M.	1	5	Jeddo No. 4, ----	Instantly killed by explosion of dynamite in breast.
22	Beelan Seyman, ----	Polish, ----	Laborer, ----	27	S.	---	---	Harwood, ----	Fatally injured by fall of coal on gangway.
25	Richard Cartwright, --	English, ----	Miner, ----	52	M.	1	---	Sandy Run, ----	Fatally injured by fall of roof on gangway.
Sept. 5	Batista Tury, ----	Austrian, ----	Miner, ----	25	S.	---	---	Drifton No. 2, ----	Fatally injured. Squeezed between motor and rib of gangway.
16	James Bonner, ----	Irish, ----	Miner, ----	49	M.	1	---	Highland No. 5, ---	Instantly killed by premature blast in breast.
Oct. 14	James Campbell, ----	American, ----	Motor patch- et.	21	S.	---	---	Highland No. 5, ---	Fatally injured. Squeezed between air motor and car on gangway.
17	Joseph Dutcavage, ---	Polish, ----	Miner, ----	32	S.	---	---	Beaver Brook, ----	Fatally injured by blast in cross-cut of breast.
22	Michael Alex, ----	Polish, ----	Miner, ----	39	S.	---	---	Lattimer, ----	Fatally injured by fall of coal in taking out pillars.
Nov. 14	Dennis North, ----	American, ----	Fuelman, ----	22	S.	---	---	Drifton, ----	Instantly killed by machinery of drag line. Outside.
16	Ross Colet, ----	Italian, ----	Miner, ----	26	M.	1	---	Drifton No. 1, ---	Instantly killed by premature blast in breast.
21	Frank Butcavage, ----	Lithuanian, ----	Miner, ----	35	S.	---	---	Hazle Mountain, ---	Instantly killed by fall of slate in breast.
Dec. 12	Mike Cowcow, ----	American, ----	Patcher, ----	17	S.	---	---	Beaver Brook, ----	Fatally injured. Caught in the abdomen between ear and sprag.

Luzerne, ---

TABLE 5.—Non-fatal accident ts inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Mine	County	Nature and Cause of Accident in Brief
Jan. 8	Samuel Yovas, -----	Montenegrian, -----	Laborer, -----	21	S.	Tomhicken, -----		Face and arms lacerated by premature blast.
9	Mike Guida, -----	Hungarian, -----	Miner, -----	30	M.	Highland No. 2, -----		Leg and arm fractured by fall of slate.
13	Joseph McAlarney, -----	American, -----	Driver, -----	22	S.	Harwood, -----		Body squeezed by cars on gangway.
14	Stanislo Leoprowski, -----	Polish, -----	Statepcker, -----	18	S.	Harwood, -----		Back bruised by machinery on breaker. Outside.
18	Lewis Bott, -----	American, -----	Laborer, -----	22	S.	Lattimer, -----		Body injured by fall of coal in breast.
21	George Krowetski, -----	Polish, -----	Miner, -----	37	M.	Lattimer, -----		Face and hands burned by explosion of gas.
24	Mike Skimbo, -----	Slavonian, -----	Miner, -----	37	M.	Granberry, -----		Leg fractured by fall of coal in breast.
24	Paul Felsetz, -----	Hungarian, -----	Laborer, -----	18	S.	Beaver Brook, -----	Luzerne, ---	Arm fractured by falling under car. Outside.
27	Mike Strack, -----	Polish, -----	Miner, -----	38	M.	Hazleton shaft, -----		Leg fractured by flying coal from shot.
10	Toney Klatch, -----	Italian, -----	Miner, -----	28	M.	Lattimer, -----		Leg fractured by flying coal from shot.
10	Mike Girardo, -----	Italian, -----	Miner, -----	51	M.	Lattimer, -----		Leg bruised by flying coal from shot.
17	John Enos, -----	American, -----	Driver, -----	17	S.	Eckley, -----		Ribs fractured. Squeezed between car and cribbing.
17	Robert Richardson, -----	English, -----	Miner, -----	43	M.	Harwood, -----		Hip dislocated by falling under car on slope.
Mar. 7	Jacob Fianalis, -----	Italian, -----	Laborer, -----	38	M.	Hazle Mountain, -----		Leg fractured by lever falling upon it. Outside.
11	Bernard Martin, -----	American, -----	Locomotive engineer, -----	24	M.	Spring Brook, -----	Carbon, ---	Arm bruised by machinery of locomotive. Outside.
12	Joseph Sehnee, -----	American, -----	Miner, -----	38	M.	Sandy Run, -----		Ribs fractured between ear and timber on gangway.
16	John O'Donnell, -----	American, -----	Engineer, -----	26	S.	Drifton No. 2, -----		Leg fractured by machinery in engine house. Outside.
18	Alex. Aleks. Jaski, -----	Polish, -----	Miner, -----	47	M.	Hazleton shaft, -----	Luzerne, ---	Arms and body lacerated by flying coal from shot.
18	Joseph Alexshinski, -----	Polish, -----	Laborer, -----	21	S.	Hazleton shaft, -----		Eye blown out and collar bone fractured by flying coal from shot.

Mar. 18	Peter Machas, -----	Hungarian, -----	Laborer, -----	40	M.	Deringer, -----	Leg crushed. Caught between locomotive and dump car. Outside.
28	Joseph Yascavitch, -----	Polish, -----	Miner, -----	39	M.	Jedto No. 4, -----	Back contused by fall of slate in gangway.
31	Henry Moss, -----	American, -----	Miner, -----	56	M.	Hazle Mountain, -----	Body bruised. Run over by car in breast.
April 6	John Nagle, -----	Polish, -----	Miner, -----	34	S.	Leaky, -----	Collar bone fractured by fall of frozen clay.
9	Peter Gallagher, -----	American, -----	Hitcher, -----	23	S.	Drifton, -----	Leg fractured by cars on gangway.
10	Conrad Butz, -----	Hungarian, -----	Miner, -----	33	S.	Deringer, -----	Hip dislocated by fall of slate.
11	Fedor Kofanski, -----	Slavonian, -----	Laborer, -----	44	M.	Lattimer, -----	Ankle fractured by hay rack falling upon him in stable. Outside.
11	George Gerlek, -----	Hungarian, -----	Laborer, -----	25	M.	Drifton, -----	Lung punctured. Squeezed between car and breaker pillar. Outside.
11	Arthur Connor, -----	American, -----	Laborer, -----	21	S.	Sandy Run, -----	Leg fractured by being bumped from gondola. Outside.
14	Frank Antonell, -----	Austrian, -----	Laborer, -----	19	S.	Hazle Mountain, -----	Leg fractured by fall of coal.
15	Giovanni Yamafaglio, -----	Italian, -----	Driver, -----	19	S.	Lattimer, -----	Internally injured by cars on slate bank. Outside.
21	O. A. Rohrbach, -----	American, -----	Machinist, -----	51	M.	Drifton, -----	Lung punctured by falling from trestle. Outside.
23	Joe Deluka, -----	Italian, -----	Laborer, -----	37	M.	Hazleton shaft, -----	Leg contused. Caught between bumpers of cars. Outside.
28	Arthur Fink, -----	American, -----	Jig-runner, -----	18	S.	Hazle Mountain, -----	Leg fractured by machinery on breaker. Outside.
28	George Kososo, -----	American, -----	Laborer, -----	17	S.	Lattimer, -----	Seriously injured by falling down manway of breast.
May 11	James Julian, -----	American, -----	Engineer, -----	40	M.	Spring Brook, -----	Hands and neck scalded by bursting steam pipe. Outside.
12	Adam Mitchell, -----	American, -----	Laborer, -----	38	M.	Cranberry, -----	Jaw fractured. Struck by piece of coal that rolled down slope.
13	Jacob Prebeck, -----	Austrian, -----	Miner, -----	31	M.	Cranberry, -----	Eye and face injured by flying coal from shot.
16	John Witz, -----	Austrian, -----	Miner, -----	41	M.	Deringer, -----	Face and hands burned by explosion of gas.
18	Oscar Pettit, -----	American, -----	Fireman, -----	39	M.	Hazleton shaft, -----	Nose fractured and face bruised by timber striking him. Outside.
22	John Krutal, -----	Polish, -----	Laborer, -----	53	S.	Deringer, -----	Clavicle bone fractured between ear and breaker door. Outside.
June 5	John Krings, -----	German, -----	Miner, -----	45	M.	Eckley, -----	Rib fractured. Squeezed between timber truck and rib.
9	Leshaw Heyde, -----	Austrian, -----	Miner, -----	51	M.	Hazleton shaft, -----	Hip contused by fall of coal.
13	Julius Pletcher, -----	Polish, -----	Laborer, -----	22	S.	Cranberry, -----	Leg fractured by fall of slate.
16	Frank Garborechick, -----	Polish, -----	Miner, -----	25	M.	Cranberry, -----	Pelvis injured and face lacerated by fall of coal.
16	John Russick, -----	Polish, -----	Laborer, -----	34	S.	Cranberry, -----	Legs contused by falling under cars. Outside.
17	George Rusnock, -----	Austrian, -----	Driver, -----	21	S.	Hazle Mountain, -----	Leg fractured. Caught between derailed car and rib.
20	Arthur Beltz, -----	American, -----	Locomotive patcher, -----	17	S.	Deringer, -----	Head squeezed between cars. Outside.

Luzerne, ---

Carbon, ---

Luzerne, ---

TABLE 5.—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Mine	County	Nature and Cause of Accident in Brief
June 20	Peter Tuckloski, -----	Polish, -----	Miner, -----	39	M.	Hazleton shaft, -----	-----	Shoulder and hip bruised by fall of coal.
21	Mike Warget, -----	Hungarian, -----	Laborer, -----	38	M.	Drifton, -----	-----	Arm fractured between chute and brake wheel of car. Outside.
July 8	George Anderson, -----	Hungarian, -----	Driver, -----	18	S.	Upper Lehigh, -----	Luzerne, -----	Leg fractured by being thrown under car.
24	Steve Willis, -----	English, -----	Machinist, -----	34	M.	Spring Brook, -----	Carbon, -----	Head lacerated by fall of slate while placing column pipe.
28	Andro Pompitskie, -----	German, -----	Miner, -----	38	S.	Hazleton No. 1, -----	-----	Ribs fractured by fall of coal.
28	John Gallo, -----	Slavonian, -----	Coal loader, -----	33	M.	Cranberry, -----	-----	Arm lacerated. Caught between bumpers of cars. Outside.
28	John Kresge, -----	German, -----	Miner, -----	27	M.	Upper Lehigh, -----	Luzerne, -----	Spine fractured by fall of slate while removing pillars.
Aug. 5	John Hollas, -----	Slavonian, -----	Laborer, -----	28	M.	Cranberry, -----	-----	Spine fractured by car turning over on bin. Outside.
6	Edward Gallagher, -----	Irish, -----	Miner, -----	61	M.	Spring Brook, -----	-----	Leg fractured by cars on gangway.
8	Lorenz Pesko, -----	Polish, -----	Miner, -----	46	S.	Lattimer, -----	-----	Body bruised by kick of a mule.
8	Alex De Rittes, -----	Italian, -----	Jig-runner, -----	24	S.	Lattimer, -----	-----	Arm fractured by being caught in machinery. Outside.
12	Joe Capunai, -----	Italian, -----	Laborer, -----	27	M.	Hazleton shaft, -----	-----	Leg fractured between cars. Outside.
17	Nestor Feshock, -----	Polish, -----	Miner, -----	26	M.	Highland No. 5, -----	Luzerne, -----	Face burned and lacerated by explosion of dynamite.
Sept. 4	August Shimshick, -----	Lithuanian, -----	Miner, -----	30	S.	Hazleton shaft, -----	-----	Arm fractured by fall of coal.
11	Mike Siook, -----	Hungarian, -----	Laborer, -----	48	M.	Upper Lehigh, -----	-----	Leg fractured by piece of coal rolling upon it. Outside.
13	Andrew Hanlon, -----	Irish, -----	Laborer, -----	47	M.	Spring Brook, -----	Carbon, -----	Back contused by falling into coal pit. Outside.
16	Andrew Superdak, -----	Hungarian, -----	Miner, -----	53	M.	Drifton No. 1, -----	-----	Ribs fractured and head lacerated by fall of coal.
16	Edward Burke, -----	American, -----	Miner, -----	34	S.	Lattimer, -----	Luzerne, -----	Nose fractured and head lacerated by coal rolling down manway.
17	Joseph Jensiński, -----	Hungarian, -----	Laborer, -----	20	S.	Spring Brook, -----	Carbon, -----	Leg fractured by timber striking bin. Outside.

Sept. 17	Savery Chercofski, ---	Polish, -----	Miner, -----	40	M.	Highland No. 5, -----	Shoulder blade fractured by blast.
18	Joseph Koltus, -----	Polish, -----	Miner, -----	48	M.	Hazleton shaft, -----	Arm fractured by fall of coal.
19	Henry Dodson, -----	American, -----	Hitcher, -----	34	M.	Cranberry, -----	Hand lacerated by lump of coal striking him. Outside.
Oct. 8	Paul Bresbel, -----	Hungarian, -----	Laborer, -----	64	M.	Deringer, -----	Collar bone fractured by striking switch guard. Outside.
12	David Harris, -----	American, -----	Pump-runner, -----	19	S.	Cranberry, -----	Head lacerated by striking beam in engine house. Outside.
14	Joe Yunkoskie, -----	Polish, -----	Miner, -----	44	M.	Hazleton shaft, -----	Leg bruised by fall of slate.
24	Frank Hincle, -----	American, -----	Miner, -----	55	M.	Hazleton shaft, -----	Back bruised by fall of slate.
31	Mike Petrilla, -----	Slavonian, -----	Miner, -----	45	M.	Cranberry, -----	Eye blown out and hand shattered by explosion of box of caps.
Nov. 4	George Goefall, -----	Slavonian, -----	Laborer, -----	18	S.	Hazle Brook, -----	Leg fractured by fall of slate.
5	Dymtro Patahunk, -----	Russian, -----	Laborer, -----	27	S.	Lattimer, -----	Leg fractured by fall of slate.
7	Elmer Thrash, -----	American, -----	Driver, -----	23	S.	Harwood, -----	Arm fractured by ears on gangway.
20	Thomas Kutehenofski, -----	Lithuanian, -----	Miner, -----	37	M.	Lattimer, -----	Arm fractured by fall of coal.
23	Henry Klisber, -----	American, -----	Carpenter helper, -----	17	S.	Sandy Run, -----	Skull fractured. Struck by piece of scrap iron. Outside.
Dec. 21	Frank Freltz, -----	Austrian, -----	Miner, -----	36	M.	Deringer, -----	Head lacerated by flying coal from shot.
24	John Blorsky, -----	Polish, -----	Miner, -----	45	M.	Lattimer, -----	Face, neck and hands burned by explosion of gas.
24	Stanley Borioostewitz, -----	Polish, -----	Miner, -----	35	M.	Lattimer, -----	

FATAL ACCIDENTS

BY FALL OF SLATE

March 18, at Hazleton No. 1 Colliery, Slope No. 8, Lehigh Valley Coal Company, Henry Krause, miner, and Howard Nelems, laborer, were instantly killed by a fall of slate on the West Primrose Gangway. Krause had been instructed by the mine foreman to secure this gangway preparatory to resuming work, after suspension of several months on account of repairing breaker. He and a gang of laborers went to the place with the mine foreman, Mr. James Harlor, and after carefully examining the gangway, it was concluded to take out the old timber and blast the loose slate down. The foreman then left them. Two sets of timbers had been thrown down, and the laborers were drilling a hole in the top slate with an auger, when Krause took a bar and started to loosen the third set of timber, and as he did so the set fell down, allowing a great mass of slate to fall, catching him and Nelems. The other men barely escaped.

This accident was caused by a mistake on the part of Krause. Although a good miner and a practical timber-man, he made a fatal mistake in taking out more than two sets of timber, until he had some of the slate which was resting upon the timber taken down or blasted. Or on the other hand, if he was going to throw down any more timber, he should have at least told his laborers to get to a place of safety, while he himself was doing the work. As it was, the noise made by the laborers drilling prevented him from hearing the top slate working.

BY SUFFOCATION

April 4, Highland No. 5 Colliery, G. B. Markle and Company, Mike Tokash and John Washenic, miners, were instantly suffocated by a rush of mud and water. The general inside foreman had been in the working place the afternoon of the day previous and had instructed the men to place a battery in the upper heading or cross-cut. On the morning of the 4th, the day of the accident, they were seen down on the flat at the bottom of the breast cutting a prop. About fifteen minutes later the men taking the pillar out between Nos. 14 and 15 heard the rush and came down from their working place. They shouted to the two men, who were taking the pillar out between No. 13 and No. 13½, but got no answer. It was then thought that the men might be alive at the top of Breast No. 13. I was notified of the accident about 9.30 A. M. and immediately went to the mine and advised drilling a hole through the pillar between No. 12½ and No. 13. This was done and we drilled into mud and water. We then went some distance higher in the breast and drilled another hole with the same result. This necessitated going farther along the pillar, which was done, and another hole drilled through. This hole went through into empty space and a cross-cut was started at this point, but before driving the cross-cut very far the water raised in No. 13 breast until it poured out through the test hole, showing that the breast was full of mud and water to the face. Knowing that the

men could not be alive, a cross-cut was driven on a slant near bottom of No. 12½ chute, and the mud drawn off. This proved to be very tedious and slow, but when sufficient was drawn off to dry the hole at face, the cross-cut was driven through the pillar into face of No. 13 Breast. Afterwards two other cross-cuts were driven through same pillar and mud drawn off from each. The bodies were recovered on the 16th of April after working continually for two weeks. During most of the time I was on the scene directing the work. The accident was referred to a coroner's jury, who rendered a verdict of accidental death.

CONDITION OF COLLIERIES

G. B. MARKLE AND COMPANY

Jeddo No. 4 and Ebervale.—Ventilation good; roads and drainage good; condition as to safety good.

Highland No. 5.—Ventilation good; roads and drainage good; condition as to safety good.

Highland Nos. 1, 2 and 6.—Ventilation good; roads and drainage good; condition as to safety good.

COXE BROTHERS AND COMPANY, INCORPORATED

Drifton Nos. 1 and 2.—Ventilation good; roads and drainage good; condition as to safety good.

Eckley, Buck Mountain and Stockton.—Ventilation good; roads and drainage good; condition as to safety good.

Deringer, Gowen and Tomhicken.—Ventilation good; roads and drainage good; condition as to safety good.

LEHIGH VALLEY COAL COMPANY

Hazleton Shaft.—Ventilation good; roads and drainage good; condition as to safety good.

Hazleton No. 1.—Ventilation good; roads and drainage good; condition as to safety good.

Spring Brook.—Ventilation fair; roads and drainage good; condition as to safety good.

A. PARDEE AND COMPANY

Cranberry.—Ventilation fair; roads and drainage bad; condition as to safety good.

PARDEE BROTHERS AND COMPANY

Lattimer.—Ventilation good; roads and drainage good; condition as to safety good.

HARWOOD COAL COMPANY

Harwood.—Ventilation good; roads and drainage fair; condition as to safety good.

UPPER LEHIGH COAL COMPANY

Upper Lehigh.—Ventilation good; roads and drainage good; condition as to safety good.

C. M. DODSON AND COMPANY

Beaver Brook.—Ventilation good; roads and drainage bad; condition as to safety good.

HAZLE MOUNTAIN COAL COMPANY

Hazle Mountain.—Ventilation fair; roads and drainage fair; condition as to safety good.

JOHN S. WENTZ AND COMPANY

Hazle Brook.—Ventilation fair; roads and drainage fair; condition as to safety good.

M. S. KEMMERER AND COMPANY

Sandy Run.—Ventilation good; roads and drainage good; condition as to safety good.

STAUFFER AND ROWE

Rowe.—Ventilation fair; roads and drainage fair; condition as to safety good.

POND CREEK COAL COMPANY

Pond Creek.—Ventilation fair; roads and drainage bad; condition as to safety good.

THOMAS R. REESE AND SON

Dusky Diamond.—Ventilation fair; roads and drainage good; condition as to safety good.

BLACK CREEK COAL COMPANY

Harleigh.—Idle.

IMPROVEMENTS

G. B. MARKLE AND COMPANY

Jeddo No. 4 Colliery.—Wharton Slope hoisting engine removed and placed in Slope A, Highland No. 6. Road built to large cave-ins, which are being filled up with rock.

Highland No. 5 Colliery.—Slope A, hoisting engine removed from Water Works Pumping Station at Jeddo and located at the top of Slope A. Air line extended from Tunnel O to Plane J. Tunnel O completed and a gangway driven to the west, making connections

with the east gangway from top of Plane J. Air shaft sunk from surface to west gangway of Plane J. Air shaft driven through fault to connect Slope B and Tunnel M sections.

A canal and flume constructed from the Foundryville culvert under the Lehigh Valley Railroad tracks to a confluence with the Big Black Creek Canal, for better drainage of the basin.

Highland No. 2 Colliery.—A pump has been installed in Tunnel C, west dip gangway, and the work of opening up Slope D is under way.

Highland No. 1 Colliery.—Electric haulage in Slope C extended from top of Slope B to the main bottom. A new 5 inch steam line 1,700 feet in length put in. Four rock holes driven to Gamma vein, and mining begun in this vein at eastern end of property.

Highland No. 6 Colliery.—Installed one 300 H. P. Babcock and Wilcox boiler, and necessary changes made in boiler house.

Slope A sunk to a depth of 200 feet and hoisting engine removed from Jeddo No. 4 Wharton slope and located in Slope A.

A reservoir having a capacity of 1,400,000 gallons of water has been constructed on the north side of the valley about 1,200 feet from the slope of a 4 inch supply line laid to boiler house.

Ebervale Colliery.—On account of cave-in in the Primrose vein the course of the canal has been changed from the old channel north to the Ebervale old canal, the north bank has been built and the south bank of the old canal repaired.

Wharton waterway has been connected with Tunnel A.

Harleigh Colliery. The Holmes vein slope completed to first lift. Tunnel A driven to Primrose vein. Substantial engine house with concrete foundations located at the Holmes slope and one 150 H. P. electric hoist installed.

Stripping operations are in progress at the west end of the property.

COXE BROTHERS AND COMPANY, INCORPORATED

Drifton Colliery.—No further developments have been made, except continuing the Northwest gangway, at Drifton No. 2, which turned a saddle and entered the basin north. The gangway was stopped after driving westward in fault for a considerable distance. The gangway following the south basin westward continues to develop the Buck Mountain vein, pitching to the South. At Drifton No. 1, no gangways were driven. They are working principally the Wharton on the Coxe estate (over 200 breasts remaining to be worked from gangways driven several years ago) and robbing on the Black Creek Improvement land on the Buck Mountain.

The strippings at the West were continued and 300,298 yards removed, making a total of 2,676,843 yards since the strippings were started.

Eckley Colliery.—The opening work was done in Eckley Slope No. 6 in the Wharton vein and a fan erected to ventilate this section.

In Eckley Slope No. 2 the mining was principally done on the saddle between Slope No. 1 and Slope No. 2 and a gangway driven to open the invert basin between No. 2 and the old Trial Slope workings.

In the old Buck Mountain workings the gangway in top split of Buck Mountain vein, No. 2 tunnel, is being continued and the connection with Slope No. 11 is being graded from No. 2 west gangway.

Slope No. 12 has been continued, following the east spoon of the old No. 6 workings. This work is done principally for drainage purposes under the No. 6 strippings.

In the No. 6 stripping 139,373 yards of second class material were removed by two shovels, or a total of 502,016 yards since work was started. In strippings east of slope No. 11 only 1,883 yards were removed, as the contractor forfeited the work and was ordered to remove his plant.

At Buck Mountain No. 2, 163,367 yards of second class material were removed, by two shovels, making a total to January 1, 1909 of 1,257,138 yards.

Stockton Slope.—The Gamma gangways in the tunnel mentioned in last year's report have been continued east and west and an airway driven to the south, which has now advanced about 400 feet. The open work in the Primrose has been retarded by entering a cave from the Old Linderman and Skeer Mammoth workings. A tunnel was driven from the Wharton across a fault into the old Wharton workings, which will relieve the Stockton North side workings from any accumulation of water during a wet spell.

Deringer Colliery.—The regular gangways were continued; the lower lift air motor is now handling coal from Gowen No. 4 direct to the Deringer shaft hoist, saving about two miles transportation inside and outside.

A proving slope is being sunk in a "pot" tested by Diamond drill holes in the top of the Mountain between Deringer and Weston, and was driven to the basin. They are driving now out to the surface on the opposite pitch. The vein is evidently the Buck Mountain, disconnected from the main basin by an upthrow.

Gowen Slope.—Gangways in Slope No. 6, Buck Mountain vein, and North tunnel, Wharton vein, have been extended. An airway 700 feet long has been driven to the surface on south side of basin. This, with the installation of fan at top of Slope No. 3, will materially improve the ventilation.

Three Diamond drill holes were sunk at the west end of the Roberts Run basin to test the vein, which has been cut out by faults across the whole basin on the different levels.

Tomhicken Slope.—Slope No. 8 was extended to the Buck Mountain; turnout and gangways driven at bottom of slope.

LEHIGH VALLEY COAL COMPANY

Hazleton No. 1 Colliery.—The remodeling of the breaker, which was mentioned in report of 1907, has been completed, gangways in the overlying veins continued, and the robbing territory extended.

The brick dam on Fourth lift, Mammoth, West side, started in 1907, was finished.

An oil burning locomotive was obtained and the service of it is extended continually by straightening the tracks and gangways.

The strippings on the No. 6 basin were continued and 61,013 yards removed which brings the total up to 385,143 yards. An unusually large bench of very hard rock has considerably interfered with the progress of this stripping.

Hazleton Shaft Colliery.—The breaker is being remodeled; the drag lines by which the coal was taken from the north and south sides to the top of the breaker, will be replaced by a gun-boat hoist. A rock

conveyor is being constructed to handle more economically the refuse.

The boiler plant has been enlarged by adding 600 H. P., and preparations are under way to install a new pumping plant on a lower elevation, for the purpose of making the large body of coal in the Diamond and Stockton section accessible, which at present remains submerged on account of the fire in the slate banks from the old South No. 2 or No. 8 breaker since the time when Linderman and Skeer abandoned the colliery. Proving holes driven in the Wharton vein under the territory on fire gave the opportunity to test the condition of the Mammoth and Primrose, and it is evident that no fire now exists and the unusual heat is nothing but the temperature of the overlying strata caused by the slate bank burning on the surface. As no ventilation existed, the cooling off is naturally a slow process, but the developments make it safe to take out the water and re-open the workings. This will be accomplished by an 18 x 27 x 24 x 36 inch Triple Expansion Duplex pump, installed in the East Gamma gangway, No. 40 slope, for which the pipe-way has been driven to the surface and pump-rooms being made. The East Gamma gangway is being extended eastward and will tap by cross tunnels and bore holes the No. 1 and No. 2 Diamond slopes and will eventually be extended to the Stockton property.

The electric haulage is being improved and about 11,000 feet of service added.

A tunnel about 250 feet long was driven in the No. 3 section, from the Diamond to the Tracy vein, which was struck in the basin, and three gangways have been started off. The vein shows so far, in fair condition, from 6 feet to 8 feet thick.

A plane previously used by A. Pardee and Company to lower coal on the south side of the basin to the main working level, is being cleaned up and a hoisting engine will be installed to bring the coal to the shaft breaker.

Considerable trouble is experienced by faults being encountered in the smaller veins above and below the Mammoth, which necessitates considerable proving and rock work.

The No. 5 strippings are being extended, 62,039 yards having been removed during 1908, or a total of 441,993 yards to January 1, 1909. Considerable coal will become available shortly.

The Stockton section was idle the greater part of the year as ventilating fan was destroyed by fire. The fan is being replaced now on a different site, near the dividing line between the estate of Tench Coxo and the East Sugar Loaf Coal Company.

Spring Mountain Colliery.—The breaker has been completed; and the boiler house enlarged so that it contains now a 2,700 H. P. plant; a fresh water line connects this operation now with the Hudsondale pumping station of the Hazleton Water Company by way of Roan reservoir; the breaker sidings have been completed.

The breaker wash water will be pumped to a reservoir from Slope No. 7, where two large pumps have been installed. Pumping at Slope No. 1 has been discontinued and all water east of Slope No. 7 will be handled at Slope No. 7 to the breaker reservoir. This, with the No. 4 supply taken through the long tunnel to Slope No. 7, is considered sufficient for satisfactory preparation.

The hoisting planes, with gun-boat pit, over which the Spring Brook, Oneida and stripping coal will be handled, are completed and work satisfactorily.

The breaker slope, which will take the Spring Mountain underground coal to the breaker direct, has been driven and track is now being laid. Bottom arrangements are being put in and a slope driven along the western boundary line has been connected. Through this slope the principal part of the Spring Brook coal will be taken underground to the new breaker.

A stripping in extension of the old stripping excavations has been contracted and 29,784 yards removed during 1908. By a mile of surface mine tracks this coal will be taken to the breaker.

Until all the inside connections are completed the Spring Brook coal is dumped in railroad cars and taken to Spring Mountain for preparation.

UPPER LEHIGH COAL COMPANY

Upper Lehigh Colliery.—No. 3 slope at the eastern end of property was robbed and abandoned, and boiler of 100 H. P. removed to Q Slope at western end of property.

Erected fan and engine-house at No. 7 slope, small seam.

Increased the size of the steam line in No. 2 boiler-house to a 12 inch header, and larger outlet to the main line running to No. 6 slope. Installed one of Ayers' pickers in breaker and made a number of repairs about the breaker.

Erected a new washery southeast of breaker, with a capacity of about 100 tons a day; the coal from here is partially prepared and then put through main breaker for final preparation.

Five steam shovels were working the greater part of the year, and removed 109,959 yards of earth and 145,555 yards of rock.

Installed one electric direct generator, capacity 121 volts, 440 amperes, 840 revolutions, in addition to a 125 H. P. engine for driving same.

C. M. DODSON AND COMPANY

Beaver Brook Colliery.—Four 175 H. P. return tubular boilers installed in main plant. Tunnel driven 112 feet long in No. 11 slope from the Buck Mountain to Lykens Valley vein.

Re-opened No. 5 slope and sank same to the basin, and erected one pair of 22x36 hoisting engines at this slope.

A new dry side built in No. 1 breaker.

A drainage canal constructed one mile in length to divert breaker wash beyond the outcrop.

New artesian well sunk to a depth of 500 feet.

HAZLE MOUNTAIN COAL COMPANY

Hazle Mountain Colliery.—The water in the Old No. 2 slope formerly operated by J. S. Wentz and Company was successfully tapped. The water was tapped with two 3 inch Diamond drill holes, and drained into No. 1 slope workings, and then pumped to surface.

Inside slope started in Wharton vein to basin of No. 2, to handle all the coal from the No. 2 basin. This coal will then be hauled via No. 2 tunnel completed last year, to No. 1 slope, and thence to the breaker.

Started to re-open No. 2 slope for a mule and traveling way.

A wash-house erected at No. 5 slope, fitted with fifty individual lockers and stationary tubs, each supplied with hot and cold water spigots,

A new locomotive house erected with pits of concrete, and a tank so placed that locomotives can be filled while in the house.

Built a shed to prevent the freezing of coal in cars that stand out over night.

Erected a slush trough 900 feet long and 43 feet high at the breaker. This trough empties into a settling dam, the water percolating through an ash bank and becoming perfectly clear.

Installed one 16-16-18 McKiernan air compressor, one 250 H. P. Babcock and Wilcox boiler, and one 10-16 fan engine.

The breaker has been equipped with one new breaker engine, two sets of rolls, two set of elevators, and four 12 feet double deck shakers.

BLACK CREEK COAL COMPANY

Harleigh Colliery.—No work has been done at this colliery since the spring of 1906. A new breaker, the walls of which have already been constructed, will be erected about 100 feet west of the present boiler-house.

A new slope is being sunk in the Buck Mountain vein to the basin and they are projecting a gangway on the tunnel level west. A slope has already been sunk from the surface to the Primrose vein at Spear Point and they have driven about 80 feet in the coal. A slope has been started to the Wharton vein and is down 40 feet in the clay.

They intend to install electric power for the handling of this end of the property, and are now awaiting the extension of the lines for the purpose of further development on this tract.

Mine Foremen's Examinations

The annual examination of applicants for certificates of qualification as Mine Foremen and Assistant Mine Foremen was held at the Pine Street School Building, Hazleton, June 23 and 24. The Board of Examiners was composed of the following members:

David J. Roderick, Inspector, Hazleton; Fred Henry, Miner, West Hazleton; Fred Young, Miner, Hazleton.

The following applicants passed a successful examination and were granted certificates:

Mine Foremen

Harry Lewis, Lansford; John P. Davis, Lansford; David H. Davies, Lansford; Edward J. O'Donnell, Lansford; Edward Adams, Summit Hill; Jacob Rose, Summit Hill; John Paisley, Nesquehoning; Wilson C. Bressler, Jeddo; Charles McGill, Jeddo; James R. Thomas, Jeddo; John D. Jones, Freeland; Anthony Carlis, Freeland; Patrick F. Gallagher, Eckley; Reuben B. Spires, Eckley; Peter Schneider, Holly-wood; J. Foster Gundry, Stockton; John D. Phillips, Hazleton; Frank J. Conahan, Hazleton; William H. Dettrey, Hazleton.

Assistant Mine Foremen

Joseph Barber, Summit Hill; John E. Davis, Lausford; Mike Nichel, Lausford; David Jones, Lausford; George Hein, Lausford; Bernard Cuning, Summit Hill; Daniel Davis, Summit Hill; William Black, Summit Hill; John B. Brennan, Nuremberg; John Branigan, Jeddo; Bernard Phillips, Jeddo; James H. Ulshafer, Hazle Brook; Adam Gerihart, Nuremberg; Anthony Auella, Lattimer; Richard E. Michael, Hazleton; Harry Letcher, Hazleton; John D. Beam, Hazleton; Con McCauley, Eckley.

Twelfth District

SCHUYLKILL COUNTY

Mahanoy City, Pa., March 3, 1909.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor of transmitting herewith my annual report as Inspector of Mines of the Twelfth Anthracite District for the year ending December 31, 1908.

The tables contain the statistics relative to production, number of days worked, employes, accidents, et cetera. The condition of the collieries is also reported.

Respectfully submitted,

P. C. FENTON, Inspector.

SUMMARY OF STATISTICS

Number of collieries,	10
Number of mines,	15
Number of mines in operation,	15
Number of tons of coal shipped to market,	2,565,502
Number of tons used at mines for steam and heat,	319,293
Number of tons sold to local trade and used by employes,	46,096
Number of tons produced,	2,930,891
Number of tons produced by compressed air machines, ..	—
Number of tons produced by electrical machines,	—
Number of persons employed inside of mines,	5,417
Number of persons employed outside,	2,462
Number of fatal accidents inside of mines,	23
Number of fatal accidents outside,	5
Number of non-fatal accidents inside of mines,	26
Number of non-fatal accidents outside,	2
Number of tons of coal produced per fatal accident inside, ..	127,430
Number of persons employed per fatal accident inside, ..	236
Number of persons employed per fatal accident outside, ..	492
Number of persons employed per non-fatal accident inside, ..	208
Number of persons employed per non-fatal accident out- side,	1,231
Number of wives made widows,	12
Number of children orphaned,	18
Number of steam locomotives used outside,	13
Number of compressed air locomotives used inside,	12
Number of electric motors used inside,	5
Number of fans in use,	15
Number of gaseous mines in operation,	14
Number of non-gaseous mines in operation,	1

TABLE A

PRODUCTION OF COAL

Names of Operators	Tons
Philadelphia and Reading Coal and Iron Company,	2,448,625
Lentz and Company,	298,554
Lehigh Valley Coal Company,	177,132
Price Coal Company,	6,580
	<hr/>
Total,	2,930,891
	<hr/> <hr/>

Production by Counties

Schuylkill,	2,930,891
	<hr/> <hr/>

TABLE B.—Fatal and non-fatal accidents inside and outside of mines; number of tons of coal produced per accident; number of persons employed; number employed per accident

Names of Operators	Fatal Accidents			Non-fatal Accidents			Tons of coal produced per fatal accident inside	Number of employees inside	Tons of coal produced per non-fatal accident inside	Number of employees inside	Number of employees outside	Total number of employees	Number of employees inside per fatal accident	Number of employees outside per fatal accident	Number of employees inside per non-fatal accident	Number of employees outside per non-fatal accident
	Inside	Outside	Total	Inside	Outside	Total										
	20	4	24	23	1	24										
Philadelphia and Reading Coal and Iron Co.,	3	1	4	2	1	3	149,277	635	1,907	988	6,474	225	492	196	1,967	
Lentz and Co.,							177,132	266	132	398	212	352	352	318	352	
Lehigh Valley Coal Co.,				1	1	1	8	8	11	19	11	19				266
Miscellaneous companies,																
Totals and averages for district,	23	5	28	26	2	28	112,727	5,417	2,462	7,879	236	492	208	1,231		

TABLE C.—Classification of Fatal Accidents Inside and Outside of Mines

	Months												Totals	Percentages	
	January	February	March	April	May	June	July	August	September	October	November	December			
Causes of Accidents Inside															
Falls of coal, -----			1	1			1	1		1		1	1	5	21.74
Falls of slate, -----	1	1			1			1				1	1	8	34.78
Mine cars, -----	1		1	1	1							1	1	4	17.39
Explosions of gas and dust, -----													1	1	4.35
Explosions of powder and dynamite, -----											1			1	4.35
Premature blasts, -----		2					1							3	13.04
Miscellaneous, -----									1					1	4.35
Totals, -----	2	3	2	2	1		2	2	2	3	4	23		100.00	
Causes of Accidents Outside															
Cars, -----		2					1				1			4	80.00
Machinery, -----								1						1	20.00
Totals, -----		2					1	1	1	1		5		100.00	
Grand totals inside and outside, -----	2	5	2	2	1		3	2	1	2	4	4	28		

TABLE D.—Classification of Non-fatal Accidents Inside and Outside of Mines

	Months												Totals	Percentages	
	January	February	March	April	May	June	July	August	September	October	November	December			
Causes of Accidents Inside															
Falls of coal, -----					1			1				2	4	15.38	
Falls of slate, -----							1		1	1		3	3	11.54	
Mine cars, -----		1							1			2	2	7.69	
Explosions of gas and dust, -----	6						2		2		3	13	13	50.00	
Explosions of powder and dynamite, -----		1							2			3	3	11.54	
Premature blasts, -----		1										1	1	3.85	
Totals, -----	6	3			1		2	1	1	6	1	5	26	100.00	
Causes of Accidents Outside															
Machinery, -----								1					1	50.00	
Miscellaneous, -----											1		1	50.00	
Totals, -----								1			1		2	100.00	
Grand totals inside and outside, -----	6	3			1		2	2	1	6	2	5	28		

TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Miners, -----	1		1	1			2	2			1	2	10
Miners' laborers, -----		3		1	1					2	1	2	10
Drivers and runners, -----											1		1
Doorboys and helpers, -----				1									1
Company men, -----	1												1
Totals, -----	2	3	2	2	1		2	2		2	3	4	23
Outside													
Slatepickers (men), -----									1				1
All other employes, -----		2					1				1		4
Totals, -----		2					1		1		1		5
Grand totals inside and outside,-----	2	5	2	2	1		3	2	1	2	4	4	28

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Miners, -----	6	3					2	1	1	4	1	4	22
Miners' laborers, -----					1					1		1	3
Doorboys and helpers, -----										1			1
Totals, -----	6	3			1		2	1	1	6	1	5	26
Outside													
All other employes, -----								1			1		2
Totals, -----								1			1		2
Grand totals inside and outside,-----	6	3			1		2	2	1	6	2	5	28

TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
American, -----			1								1		2
English, -----												1	1
Irish, -----										1			1
Polish, -----	1	3					1		1				7
Lithuanian, -----	1	1	1	1	1		2	2			3	3	15
Russian, -----		1											2
Totals, -----	2	5	2	3	1		3	2	1	2	4	4	28

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
American, -----								1		1			2
English, -----	1												1
Irish, -----	1												2
Polish, -----		1								1	2	1	5
Slavonian, -----									2	2			2
Lithuanian, -----	4	1			1		2	1	1	2		3	15
Russian, -----		1											1
Totals, -----	6	3			1		2	2	1	6	2	5	28

TABLE I.—Operators and mines, kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air current s, and number of persons employed inside

Names of Operators and Mines	Kind of opening	Gascons or non-gascons	Method of ventilation	Diameter of fan in feet	Width of blades in feet	Depth of blades in feet	Number of revolutions per minute	Water gauge developed—in inches	Name of fan	Power used	Area of furnace bars in square feet	Number of splits of air currents	Number of cubic feet of air per minute entering the mine at inlet	Total quantity of air per minute circulating in all the splits in cubic feet	Number of cubic feet per minute passing out at outlet	Number of persons employed inside
Philadelphia and Reading Coal and Iron Co.	Shaft,---															
Ellangowan,-----	Slope,---			20	6.6	6	80	2.5				9	69,808	65,905	70,445	192
Ellangowan,-----	Slope,---			18	6.6	5.6	60	1.5				6	57,752	50,130	58,200	138
St. Nicholas,-----	Slope,---			18	7	6.6	90	2.5				13	54,805	62,542	200	
Suffolk,-----	Slope,---			18	6.6	5.6	60	1.5				7	50,324	43,886	55,295	106
Suffolk,-----	Slope,---	Gaseous,	Fans,---	18	6.6	5.6	60	1.5	Guibal, --	Steam, ---		5	31,115	20,952	35,676	80
Maple Hill,-----	Shaft,---			21	7	6.6	75	1.7				10	88,538	65,570	85,200	358
Maple Hill,-----	Shaft,---			21	7	6.6	75	1.7				10	91,000	75,300	95,750	315
Tunnel Ridge,-----	Slope,---			21	7	6.3	100	2				10	112,500	113,050	227	
Mahanoy City,-----	Slope,---			21	7	6.6	86	2				10	110,266	184,490	111,060	133
North Mahanoy,-----	Slope,---			21	7	6.3	82	2				10	112,737	102,630	115,000	228
Lehigh and Co.																
Park No 2 Colliery:																
Park No. 2,-----	Slope,---			16	4	4.5	90	1.5	Guibal, --	Steam, ---		7	85,000	65,200	88,550	150
Park No. 3,-----	Slope,---			14	4	4	90	1.5				2	32,000	76,300	94,100	200
Park No. 4,-----	Slope,---			16	4.5	4.5	85	1.4				8	65,000	48,500	69,180	100
Lehigh Valley Coal Co.																
Primrose,-----	Slope,---			10	4.4	4.3	90	2	Guibal, --	Steam, ---		4	32,000	29,000	32,000	84
Price Coal Co.																
High Point,-----	Slope,---	Non-gas,	Natural, ---	16	4	4.6	100	1.5				4	29,600	25,500	29,600	66
												1	600			6

TABLE 1.—Operators, location of collieries, railroads, etc.

Names of Operators and Collieries	County	Name of General Superintendent	Post Office	Name of Superintendent	Post Office	Railroad to Mine
Philadelphia and Reading Coal and Iron Co.	Schuylkill,	W. J. Richards,	Pottsville,	Reese Tasker,	Pottsville,	P. and R.
Ellangowan, St. Nicholas, Suffolk, Maple Hill, Tunnel Ridge, Mahanoy City, North Mahanoy,	Schuylkill,	James L. Reese,	Park Place,	James L. Reese,	Park Place,	Lehigh Valley
Lentz and Co. Park No. 2,	Schuylkill,	S. D. Warriner,	Wilkes-Barre,	J. M. Humphrey,	Centralia,	Lehigh Valley
Lehigh Valley Coal Co. Primrose,	Schuylkill,	M. W. Price,	Shenandoah,	M. W. Price,	Shenandoah,	Lehigh Valley
Price Coal Co. High Point,	Schuylkill,					

TABLE 2.—Number of tons of coal mined, number of days worked, number of persons employed, number killed and injured, quantity of powder and dynamite used, etc.

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Number of kegs of powder used	Number of pounds of dynamite used	Number of horses and mules
Philadelphia and Reading Coal and Iron Co.												
Ellangowan, -----		325,528	39,384	498	365,410	201	1,101	6	3	11,640	41,860	76
St. Nicholas, -----		282,043	33,534	263	315,840	229	1,794	2	5	6,882	81,164	67
Suffolk, -----		252,484	20,700	1,200	274,474	228	801	1	2	6,533	31,951	79
Maple Hill, -----	Schuylkill,	596,837	35,619	43	632,499	225	1,473	11	3	16,104	63,209	76
Tunnel Ridge, -----		167,110	52,672	2	219,784	228	1,669	3	1	1,072	49,115	57
Mahanoy City, -----		200,808	30,969	34,987	266,764	238	710	3	3	5,185	23,166	83
North Mahanoy, -----		384,226	35,407	4,121	573,854	237	922	1	3	5,424	34,508	96
Totals, -----		2,159,136	248,285	41,204	2,448,625	-----	6,474	24	24	54,140	318,002	534
Park No. 2, -----	Schuylkill,	255,885	40,615	2,104	298,554	207	988	4	3	8,244	85,875	88
Lehigh Valley Coal Co.		144,679	30,063	2,360	177,132	222	398	-----	1	3,624	16,906	41
Price Coal Co.		5,852	300	428	6,580	160	19	-----	-----	48	800	2
Grand totals, -----		2,565,502	319,293	46,096	2,930,891	-----	7,879	28	28	66,056	421,533	665

TABLE 2. —Part 2

Names of Operators	County	Number of Boilers				Locomotives			Number of steam engines of all classes	Total horse power	Number of pumps delivering water to surface	Capacity in gallons per minute	Quantity delivered to surface per minute—gallons	Number of electric dynamos	Number of air compressors	
		Cylindrical	Horse power	Tubular	Horse power	Total horse power	Steam	Air								Electric
Philadelphia, and Reading Coal and Iron Co.,	Schuylkill,	12	360	123	15,550	15,910	10	12	1	120	22,479	22	40,912	8,380	1	10
Lentz and Co.,		---	---	15	3,750	3,750	2	---	---	14	3,810	3	4,800	---	---	---
Lehigh Valley Coal Co.,		---	---	11	1,750	1,750	1	---	4	39	2,456	4	6,353	4,617	1	---
Price Coal Co.,		---	---	1	100	100	---	---	---	2	60	---	---	---	---	---
Totals,	---	12	360	150	21,150	21,510	13	12	5	175	29,805	29	52,065	12,997	2	10

Table 3.—Part 2

Names of Operators and Collieries	County	Number of Days Worked in Breaker												Total
		January	February	March	April	May	June	July	August	September	October	November	December	
Philadelphia and Reading Coal and Iron Co.	Schuylkill,	30	14	12	20	21	12	11	16	20	21	21	22	201
Ellangowan,		22	17	13	23	24	16	14	19	21	23	24	24	229
St. Nicholas,		22	17	13	23	24	15	14	19	21	23	24	24	228
Suffolk,		22	15	14	23	24	15	13	14	19	21	22	23	225
Maple Hill,		21	16	14	23	24	16	13	14	19	21	23	24	228
Tunnel Ridge,		22	17	23	24	23	16	13	14	19	21	23	23	238
Mahanoy City,		22	17	22	22	24	16	13	11	19	21	23	24	237
North Mahanoy,		22	17	22	22	24	16	13	11	19	21	23	24	237
Lentz and Co.		Schuylkill,	24	13	10	21	23	25	13	15	14	20	16	207
Park No. 2,		Schuylkill,	23	15	23	20	21	23	12	18	19	20	17	222
Lehigh Valley Coal Co.	Schuylkill,	15	13	14	9	10	14	16	14	10	15	15	160	
Primrose,		15	13	14	9	10	14	16	14	10	15	15	160	
Price Coal Co.		15	13	14	9	10	14	16	14	10	15	15	160	

TABLE 4.—Fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Mine	County	Nature and Cause of Accident in Brief
Jan. 9	Henry Diker, ---	Polish, ---	Miner, ---	31	S.	---	---	Mahanoy City, ---	Schuylkill, ---	Killed by fall of slate at face of breast. Killed while placing a car on the track. Injured by fall of slate at face of breast. Died same day. Injured by premature blast. Died at hospital next day. Injured by premature blast. Died same day. Killed. Caught under a railroad car. Outside. Run over by rock dumper. Outside. Killed by fall of coal at face of breast. Killed. Caught between mine cars. Injured by fall of coal at face of breast. Died next day at State Hospital. Killed by fall of coal and slate at face of breast. Killed by fall of slate while robbing pillars. Injured by piece of slate that fell on him. The accident was considered slight, but he died at the State Hospital, July 3. The accident occurred June 23. Killed by train of cars while crossing the track near the breaker. Outside. Killed by premature blast at face of breast. Killed by fall of coal at face of breast. Killed by fall of slate at face of gangway.
Feb. 12	John Wylonas, --- Anthony Roditus, ---	Lithuanian, --- Lithuanian, ---	Switchman, --- Laborer, ---	22 19	S. S.	---	---	Maple Hill, --- Maple Hill, ---		
13	Joseph Chewinaskie, ---	Polish, ---	Laborer, ---	26	M.	1	1	Park No. 2, ---		
13	Peter Popovitch, ---	Polish, ---	Laborer, ---	28	M.	1	---	Park No. 2, ---		
25	Frank Vansack, ---	Polish, ---	Car-loader, ---	24	S.	---	---	Maple Hill, ---		
27	Elko Waschisin, ---	Russian, ---	Laborer, ---	46	M.	1	---	Park No. 2, ---		
Mar. 5	Charles Polaconas, ---	Lithuanian, ---	Miner, ---	32	M.	1	1	Ellangowan, ---		
11	George Urtus, ---	American, ---	Doorboy, ---	17	S.	---	---	Ellangowan, ---		
April 17	Ad. Micklounskie, ---	Lithuanian, ---	Miner, ---	27	S.	---	---	Ellangowan, ---		
21	Charles Loshkie, ---	Russian, ---	Laborer, ---	22	S.	---	---	Ellangowan, ---		
May 5	Charles Rowley, ---	Lithuanian, ---	Laborer, ---	21	S.	---	---	Mahanoy City, ---		
July 3	William Waselus, ---	Lithuanian, ---	Miner, ---	38	S.	---	---	Maple Hill, ---		
15	John Convictor, ---	Polish, ---	Car-loader, ---	23	S.	---	---	Maple Hill, ---		
20	Peter Stanisus, ---	Lithuanian, ---	Miner, ---	32	M.	1	2	Maple Hill, ---		
Aug. 4	Joseph Casper, ---	Lithuanian, ---	Miner, ---	42	M.	1	2	Maple Hill, ---		
31	Charles Oranski, ---	Lithuanian, ---	Miner, ---	40	M.	1	3	Maple Hill, ---		

Sept. 1	Luke Crossway, -----	Polish, -----	Slate picker, -	19	S. -----	Maple Hill, -----	Injured. Caught in the scraper line. He died at the State Hospital, September 5. Outside.
Oct. 21	Martin Genshensky, ---	Polish, -----	Laborer, -----	23	M. 1	St. Nicholas, -----	Killed. Caught between buggy and timber.
Nov. 30	Michael Cullen, -----	Irish, -----	Laborer, -----	38	M. 1	North Mahanoy, -----	Killed by fall of coal at face of gangway.
4	Charles King, -----	American, -----	Driver, -----	20	S. -----	Mahanoy City, -----	Killed. Fell under a trip of mine cars.
6	Stiney Yourshinskey, ---	Lithuanian, -----	Laborer, -----	22	S. -----	Ellangowan, -----	Killed by fall of slate while timbering gangway.
14	Joseph Sealinski, ---	Lithuanian, -----	Miner, -----	28	S. -----	Maple Hill, -----	Injured by explosion of powder. He died at the State Hospital, November 21.
Dec. 28	William Kerpovich, ---	Lithuanian, -----	Laborer, -----	30	S. -----	Ellangowan, -----	Killed. Run over by mine car. Outside.
18	Jacob Voluskie, -----	Lithuanian, -----	Miner, -----	29	M. 1	Park No. 2, -----	Killed by fall of coal at face of breast.
18	Alex Kosolomis, -----	Lithuanian, -----	Miner, -----	27	S. -----	Maple Hill, -----	Injured by explosion of gas at face of breast. He died at the State Hospital, December 25.
28	Anthony Gegusitus, ---	Lithuanian, -----	Laborer, -----	32	M. 1	Suffolk, -----	Killed by fall of slate while skipping pillars.
28	George Berwick, -----	English, -----	Laborer, -----	55	M. 1	St. Nicholas, -----	Injured. Caught between mine car and prop. He died on his way home.

Schnykill, -----

TABLE 5.—Non-fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Mine	County	Nature and Cause of Accident in Brief
Jan. 20	Patrick Killian, ---	Irish, ---	Miner, ---	53	M.	Mahanoy City, ---	Schuylkill, ---	Slightly burned by gas.
30	Andrew Coulson, ---	English, ---	Miner, ---	45	M.			
20	John Malauskey, ---	Lithuanian, ---	Miner, ---	22	M.			
20	Joseph Molitus, ---	Lithuanian, ---	Miner, ---	38	M.			
20	George Wikomas, ---	Lithuanian, ---	Miner, ---	40	S.	Park No. 2, ---	Schuylkill, ---	Injured by premature blast. Injured by car coming back from tippie. Hand injured by explosion of dynamite caps. Leg broken by fall of coal at face of breast.
Feb. 13	August Casper, ---	Lithuanian, ---	Miner, ---	45	S.			
20	Andrew Jargis, ---	Polish, ---	Miner, ---	24	M.			
27	Peter Yaska, ---	Russian, ---	Miner, ---	45	M.			
27	Charles Krossall, ---	Lithuanian, ---	Miner, ---	44	M.	Mahanoy City, ---	Schuylkill, ---	Leg broken by fall of coal at face of breast.
May 11	Joseph Sinshkils, ---	Lithuanian, ---	Laborer, ---	33	M.			
July 27	Anthony Smith, ---	Lithuanian, ---	Miner, ---	30	S.			
Aug. 27	Joseph Kowalski, ---	Lithuanian, ---	Miner, ---	27	S.			
31	Oliver Powell, ---	American, ---	Machinist, ---	18	S.	Park No. 2, ---	Schuylkill, ---	Leg and arm broken. Caught in machinery. Outside. Leg broken by fall of slate at face of breast.
Sept. 30	Stiney Wyloskie, ---	Lithuanian, ---	Miner, ---	23	S.			
30	Michael Idikits, ---	Lithuanian, ---	Miner, ---	47	M.			
30	Andrew Ulicani, ---	Slavonian, ---	Miner, ---	43	S.			
Oct. 20	John Sherry, ---	Lithuanian, ---	Miner, ---	55	S.	North Mahanoy, ---	Schuylkill, ---	Slightly burned by powder. Leg broken by fall of slate in chute. Leg injured. Caught between car and rail.
23	Joseph Kennick, ---	Lithuanian, ---	Laborer, ---	22	S.			
24	James Hewitt, ---	American, ---	Doorboy, ---	18	S.			
27	Peter Saleck, ---	Lithuanian, ---	Miner, ---	40	S.			
27	Adam Culusk, ---	Polish, ---	Miner, ---	30	S.	Suffolk, ---	Schuylkill, ---	Burned by gas. Injured. Caught under tippie. Outside. Injured by fall of slate at face of breast. Burned by gas at face of breast. Burned by gas at face of breast.
Nov. 13	John Shammanskie, ---	Polish, ---	Tipman, ---	45	M.			
14	William Woodman, ---	Polish, ---	Miner, ---	21	S.			
Dec. 14	Anthony Shop, ---	Lithuanian, ---	Miner, ---	34	M.			
14	Andrew Karasheftkie, ---	Lithuanian, ---	Miner, ---	33	M.	St. Nicholas, ---	Schuylkill, ---	Burned by gas at face of breast.

Burned by gas at face of breast.
 Leg broken by fall of coal while working
 in heading.
 Leg broken by fall of coal at face of
 breast.

Schuylkill, -----

M. Maple Hill, -----
 M. St. Nicholas, -----
 S. St. Nicholas, -----

38
 28
 30

Miner, -----
 Miner, -----
 Laborer, -----

Lithuanian, -----
 Polish, -----
 Irish, -----

Charles Smith, -----
 Peter Swartrick, -----
 John Keating, -----

Dec. 18
 28
 29

CONDITION OF COLLIERIES

PHILADELPHIA AND READING COAL AND IRON COMPANY

Ellangowan Colliery.—Ventilation and road beds in good condition.

St. Nicholas Colliery.—Ventilation and road beds in good condition.

Suffolk Colliery.—Ventilation and road beds in good condition.

Maple Hill Colliery.—Ventilation and road beds in good condition.

Tunnel Ridge Colliery.—Ventilation and road beds in good condition.

Mahanoy City Colliery.—Ventilation and road beds in good condition.

North Mahanoy Colliery.—Ventilation and road beds in good condition.

LENTZ AND COMPANY

Park No. 2 Colliery.—Ventilation and road beds in fair condition.

LEHIGH VALLEY COAL COMPANY

Primrose Colliery.—Ventilation and road beds in fair condition.

PRICE COAL COMPANY

High Point Colliery.—Ventilation and road beds in good condition.

IMPROVEMENTS

PHILADELPHIA AND READING COAL AND IRON COMPANY

St. Nicholas Colliery.—An electric plant to furnish power to run the Suffolk No. 1 and No. 3 dirt dredgers, electric haulage on 2nd lift, Suffolk Colliery, and for lighting purposes.

Tunnel to Little Buck Mountain vein from Bottom Split, 3rd lift gangway, south dip at breast No. 73; total length 103 yards.

Tunnel to Buck Mountain vein from Skidmore vein, 3rd lift east of slope on line of tunnel from Bottom Split to Skidmore.

Tunnel to Seven Foot from east Skidmore gangway 3rd lift, south dip at breast No. 47; total length 17 1-3 yards.

A standard colliery supply store house was erected during the year.

Equipped the two sections of St. Nicholas dirt scraper line with electric rope drive.

Tunnel Ridge Colliery.—Tunnel to Seven Foot and Skidmore veins from West Buck Mountain gangway 2nd lift north dip at breast 35; total length 49 yards.

North Mahanoy Colliery.—A 10 inch bore hole for rope and signals was drilled from the surface to Mammoth Bottom Split vein for No. 4 underground slope; total depth 306 yards.

Mahanoy City Colliery.—Tunnel from West Buck Mountain gangway at breast No. 34 to Seven Foot vein, underground shaft level; total length 44 2-3 yards.

Tunnel to connect with old Staffordshire workings from water level to top split, 1,300 feet west of main slope; total length 91 2-3 yards.

Ellangowan Colliery.—Extension of tunnel on plane level, at breast No. 68 west bottom split to Buck Mountain vein from Seven Foot vein; total length 47 yards.

A standard colliery supply store was erected during the year.

MINE FOREMEN'S EXAMINATIONS

The annual examination of applicants for certificates of qualification as Mine Foremen and Assistant Mine Foremen was held in Pottsville, April 18 and 19. The Board of Examiners was composed of the following members: P. C. Fenton, Inspector, Mahanoy City; J. L. Reese, Superintendent, Park Place; P. H. Devine, Miner, Shaft P. O., and Robert Roberts, Miner, St. Nicholas.

The following persons passed a satisfactory examination, and were granted certificates:

Mine Foremen

William Ecker, James Holloway, Thomas Quinney, Owen Jones, John Lewis, John Schuster, Harry A. Hale, Michael J. Scanlan, Herbert Noakes, Thomas J. Davies, and John G. Saricks, Mahanoy City; John Davidson, William Coombe and Griffith Powell, St. Nicholas; William Raudenbush and John McQuade, Shenandoah; Jacob Hillabush, Jackson Patch.

Assistant Mine Foremen

John Hobbs, William Skeath, Edward Purcell, Harry Pearson, William Kirchner, Cornelius Leonard and Kryan Flaherty, Mahanoy City; Edward Lindemuth, St. Nicholas; Patrick John Downey, Jackson Patch.



Thirteenth District

SCHUYLKILL COUNTY

Shenandoah, Pa., March 6, 1909.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor to transmit herewith my annual report of the Thirteenth Anthracite District for the year ending December 31, 1908.

The report contains the usual statistical information, together with a brief description of the fatal accidents, the condition of the mines and the improvements made therein, and the result of the annual examination of candidates for certificates of qualification as mine foremen and assistant mine foremen.

Respectfully submitted,

A. B. LAMB, Inspector.

SUMMARY OF STATISTICS

Number of collieries,	17
Number of mines,	29
Number of mines in operation,	28
Number of tons of coal shipped to market,	2,831,038
Number of tons used at mines for steam and heat,	409,203
Number of tons sold to local trade and used by employes,	53,792
Number of tons produced,	3,294,033
Number of tons produced by compressed air machines, ..	—
Number of tons produced by electrical machines,	—
Number of persons employed inside of mines,	5,247
Number of persons employed outside,	3,323
Number of fatal accidents inside of mines,	28
Number of fatal accidents outside,	2
Number of non-fatal accidents inside of mines,	29
Number of non-fatal accidents outside,	8
Number of tons of coal produced per fatal accident inside,	117,644
Number of persons employed per fatal accident inside, ...	187
Number of persons employed per fatal accident outside,..	1,561
Number of persons employed per non-fatal accident inside,	180
Number of persons employed per non-fatal accident outside,	415
Number of wives made widows,	15
Number of children orphaned,	26
Number of steam locomotives used outside,	35
Number of compressed air locomotives used inside,	5
Number of electric motors used inside,	1
Number of fans in use,	30
Number of gaseous mines in operation,	26
Number of non-gaseous mines in operation,	2
Number of old mines abandoned,	1

TABLE A

PRODUCTION OF COAL

Names of Operators	Tons
Philadelphia and Reading Coal and Iron Company,	1,826,161
Lehigh Valley Coal Company,	431,901
Thomas Colliery Company,	344,619
Susquehanna Coal Company,	241,561
Brookwood Coal Company,	56,782
Gerber and Seaman,	52,307
Cambridge Coal Company,	27,468
H. H. Smith and Company,	117,357
Brighton Coal Company,	109,848
Oxford Coal Company,	86,029
Total,	<u>3,294,033</u>

Production by Counties

Schuylkill,	<u>3,294,033</u>
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TABLE B.—Fatal and non-fatal accidents inside and outside of mines; number of tons of coal produced per accident; number of persons employed; number employed per accident

Names of Operators	Fatal Accidents			Non-fatal Accidents			Tons of coal produced per fatal accident inside	Tons of coal produced per non-fatal accident inside	Number of employees inside	Number of employees outside	Total number of employees	Number of employees inside per fatal accident	Number of employees outside per fatal accident	Number of employees inside per non-fatal accident	Number of employees outside per non-fatal accident
	Inside	Outside	Total	Inside	Outside	Total									
Philadelphia and Reading Coal and Iron Co.,	16		16	16	5	21	114,135	114,135	3,688	1,959	5,647	230		230	392
Lehigh Valley Coal Co.,	4		4	5	2	7	86,380	86,380	625	418	1,043	156		135	209
Thomas Colliery Co.,	6		6	4		4	57,436	86,155	314	276	590	52		78	
Susquehanna Coal Co.,		1	3	2		2	120,780	120,780	435	242	677	217	242	217	
Gerber and Seaman,	2		3	2		2		26,153	86	62	148			43	
Brighton Coal Co.,		1	1			1				94	94		94		
Oxford Coal Co.,					1	1			99	96	96				96
Miscellaneous companies,										176	275				
Totals and averages for district.	28	2	30	29	8	37	117,644	113,587	5,247	3,323	8,570	187	1,561	180	415

TABLE C.—Classification of Fatal Accidents Inside and Outside of Mines

	Months												Totals	Percentages	
	January	February	March	April	May	June	July	August	September	October	November	December			
Causes of Accidents Inside															
Falls of coal, -----										2			2	7.14	
Falls of slate, -----	1					1						1	3	10.72	
Falls of roof, -----	1					4					1		7	25.00	
Explosions of gas and dust, -----			2					2	2	1	1		8	28.58	
Suffocation by gas, etc., -----								2					2	7.14	
Explosions of powder and dynamite, -----									1			1	2	7.14	
Premature blasts, -----										1			1	3.57	
Falling into shafts, -----										1			1	3.57	
Miscellaneous, -----									1			1	2	7.14	
Totals, -----		2		2		4	2	4	3	3	5	3	28	100.00	
Causes of Accidents Outside															
Machinery, -----						1					1		2	100.00	
Totals, -----						1					1		2	100.00	
Grand totals inside and outside, -----		2		2		5	2	4	3	3	6	3	30		

TABLE D.—Classification of Non-fatal Accidents Inside and Outside of Mines

	Months												Totals	Percentages	
	January	February	March	April	May	June	July	August	September	October	November	December			
Causes of Accidents Inside															
Falls of coal, -----			1		2									3	10.35
Falls of slate, -----	1		1						1	1				4	13.79
Falls of roof, -----					1									1	3.45
Mine cars, -----		1	1	1			1							4	13.79
Explosions of gas and dust, -----					1		3						3	10	34.48
Explosions of powder and dynamite, -----					1									1	3.45
Miscellaneous, -----	2		2			1		1						6	20.69
Totals, -----	3	1	5	1	5	1	4	4	1	1		3	29	100.00	
Causes of Accidents Outside															
Machinery, -----											2	1	3	37.50	
Miscellaneous, -----	1		1					1		1		1	5	62.50	
Totals, -----	1		1					1		1	2	2	8	100.00	
Grand totals inside and outside, -----	4	1	6	1	5	1	4	5	1	2	2	5	37		

TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Fire bosses and assistants, -----										1	1		2
Miners, -----		1		2		4	1	4	2	2	4	3	22
Miners' laborers, -----		1					1		1				3
All other employes, -----		1											1
Totals, -----		2		2		4	2	4	3	3	5	3	28
Outside													
All other employes, -----						1					1		2
Totals, -----						1					1		2
Grand totals inside and outside,-----	2	2	2		5	2	4	3	3	6	3		30

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Miners, -----			2		4		2	2				2	12
Miners' laborers, -----	2		1		1		2	2	1	1		1	11
Drivers and runners, -----			1	1		1							3
All other employes, -----	1	1	1										3
Totals, -----	3	1	5	1	5	1	4	4	1	1		3	29
Outside													
Blacksmiths and carpenters, -----												1	1
Engineers and firemen, -----												1	1
Slatepickers (boys), -----	1						1						2
All other employes, -----			1						1	2			4
Totals, -----	1		1					1	1	2		2	8
Grand totals inside and outside,-----	4	1	6	1	5	1	4	5	1	2	2	5	37

TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
American, -----						1		2			1	1	5
English, -----											1		1
Welsh, -----										1			1
German, -----							2						2
Polish, -----						2		2	2	1	2	1	11
Slavonian, -----										1			1
Lithuanian, -----		1		1		2					2	1	7
Greek, -----		1		1									2
Totals, -----		2		2		5	2	4	3	3	6	3	30

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
American, -----			2	1		1					1	2	7
English, -----		1											1
Welsh, -----			1					1					2
Irish, -----								1					1
German, -----							1	1					2
Polish, -----			1		1		2	1	1		1	2	10
Italian, -----			1							1			2
Lithuanian, -----	4		1		4			1		1		1	12
Totals, -----	4	1	6	1	5	1	4	5	1	2	2	5	37

TABLE 1.—Operators, location of collieries, railroads, etc.

Names of Operators and Collieries	County	Name of General Superintendent	Post Office	Name of Super-Intendent	Post Office	Railroad to Mine
Philadelphia and Reading Coal West Shenandoah, ----- Kohinoor, ----- Turkey Run, ----- Draher, ----- Shenandoah City, ----- Gibberton, ----- Knickerbocker, ----- Boston Run, ----- Indian Ridge, ----- Plank Ridge Washery, -----	Schuylkill, -----	W. J. Richards, General Manager.	Pottsville, -----	Reese Tasker, -----	Pottsville, -----	P. and R.
Lehigh Valley Coal Co. Packer No. 1, ----- Packer No. 3, ----- Packer No. 4, -----	Schuylkill, -----	S. D. Warriner, --	Wilkes-Barre, -----	J. M. Humphrey, --	Centralia, -----	Lehigh Valley
Thomas Colliery Co. Kehley Run, -----	Schuylkill, -----	W. G. Thomas, --	Hazleton, -----	-----	-----	P. and R.
Susquehanna Coal Co. William Penn, -----	Schuylkill, -----	Robert A. Quin, --	Wilkes-Barre, -----	David V. Randall, -----	Shaft, -----	Pennsylvania
Brookwood Coal Co. Stanton, -----	Schuylkill, -----	W. G. Thomas, --	Hazleton, -----	W. G. Thomas, --	Hazleton, -----	P. and R.
Gerber and Seaman Furnace, -----	Schuylkill, -----	M. A. Gerber, --	Gibberton, -----	-----	-----	P. and R.
Cambridge Coal Co. Cambridge, -----	Schuylkill, -----	D. R. James, -----	Shenandoah, -----	D. R. James, -----	Shenandoah, -----	P. and R.
H. H. Smith and Co. Hudson Washery, -----	Schuylkill, -----	Henry Meyers, --	Minersville, -----	M. E. Jones, -----	Shenandoah, -----	P. and R.
Brighton Coal Co. Brighton Washery, -----	Schuylkill, -----	-----	-----	J. A. Davis, -----	Gibberton, -----	P. and R.
Oxford Coal Co. Oxford Washery, -----	Schuylkill, -----	W. G. Thomas, --	Hazleton, -----	Felix L. Koch, ---	Shenandoah, -----	P. and R.

TABLE 2.—Number of tons of coal mined, number of days worked, number of persons employed, number killed and injured, quantity of powder and dynamite used, etc.

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Number of kegs of powder used	Number of pounds of dynamite used	Number of horses and mules
Philadelphia and Reading Coal and Iron Co.												
West Shenandoah, -----												
Kohinoor, -----												
Turkey Run, -----												
Draper, -----												
Shenandoah City, -----												
Gilberton, -----												
Knickerbocker, -----	Schuylkill, -----											
Boston Run, -----												
Indian Ridge, -----												
Plank Ridge Washery, -----												
Totals, -----		1,524,280	256,714	45,167	1,826,161		5,647	16	21	21,707	426,858	410
Lehigh Valley Coal Co.												
Packer No. 2, -----												
Packer No. 3, -----	Schuylkill, -----											
Packer No. 4, -----												
Totals, -----		183,124	11,701		144,885	215	239	2	3	1,785	15,120	25
		137,031	24		137,955	215	290	1	2	675	16,459	38
		92,923	55,680	458	149,061	215	514	1	2	2,582	6,438	34
Thomas Colliery Co.												
Totals, -----		363,378	67,465	458	431,901		1,043	4	7	5,042	38,017	97
Kehley Run, -----	Schuylkill, -----											
		320,286	20,780	3,553	344,619	279	590	6	4	6,950	15,624	36

*No breaker; coal prepared at Knickerbocker.

TABLE 2.—Continued

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Number of kegs of powder used	Number of pounds of dynamite used	Number of horses and mules
William Penn, Susquehanna Coal Co.	Schuylkill,	202,100	36,696	2,765	241,561	200	677	3	2	4,337	29,387	66
Stanton, Brookwood Coal Co.	Schuylkill,	52,784	2,835	1,163	56,782	164	104			10	1,000	8
Furnace, Gerber and Seaman	Schuylkill,	47,861	4,360	86	52,307	216	148		2		35,400	12
Cambridge, Cambridge Coal Co.	Schuylkill,	25,089	1,812	567	27,468	150	97			475	4,900	9
Hudson Washery, H. H. Smith and Co.	Schuylkill,	111,767	5,588	2	117,357		74					
Brighton Washery, Brighton Coal Co.	Schuylkill,	101,848	8,000		109,848		94	1				4
Oxford Washery, Oxford Coal Co.	Schuylkill,	81,045	4,953	31	86,029		96		1		1,950	4
Grand totals,		2,831,038	409,203	53,792	3,294,033		8,570	30	37	38,521	553,736	646

TABLE 2.—Part 2

Names of Operators	County	Number of Boilers				Locomotives			Number of steam engines of all classes	Total horse power	Number of pumps delivering water to surface	Capacity in gallons per minute	Quantity delivered to surface per minute—gallons	Number of electric dynamos	Number of air compressors	
		Cylindrical	Horse power	Tubular	Horse power	Total horse power	Steam	Air								Electric
Philadelphia and Reading Coal and Iron Co.,	Schuylkill,	3	680	120	15,000	16	5	1	146	21,144	15	26,800	8,400	2	12	
Lehigh Valley Coal Co.,				20	4,200		5		60	6,450	8	6,212	4,881	2		
Thomas Colliery Co.,				11	1,550		2		18	700	3	3,800	700	1		
Susquehanna Coal Co.,				13	1,850		1		19	1,585	*1	1,300	668			
Brookwood Coal Co.,				5	625		2		11	500		2	600			
Gerber and Seaman,				4	330		1		9	125		1	300			
Cambridge Coal Co.,				3	300		1		4	100			150			
H. H. Smith and Co.,				3	375		2		8	276						
Brighton Coal Co.,				8	900		3		12	628						
Oxford Coal Co.,				5	550		3		6	131						
Totals,			3	680	192	25,680	35	5	1	294	31,639	30	39,132	14,879	3	12

*One pair of engines.

Table 3.—Number of each class of employes inside and outside of mines

Names of Operators and Collieries	County	Inside											Outside						Grand total inside and outside			
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Doorboys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Foremen	Blacksmiths and carpenters	Engineers and firemen	State pickers (Boys)	State pickers (men)		Bookkeepers and clerks	All other employes	Total outside
Philadelphia and Reading Coal and Iron Co.		1	9	---	137	86	20	11	2	49	122	436	---	2	8	26	124	38	7	239	444	880
West Shenandoah, -----		---	---	---	26	89	15	---	2	12	59	207	---	---	4	14	---	---	3	25	44	251
Kohinoor, -----		---	---	---	104	192	20	3	---	76	184	589	---	---	7	8	---	---	3	62	81	670
Turkey Run, -----		---	---	---	147	114	44	8	---	112	137	570	---	1	9	93	53	34	3	119	242	812
Draper, -----		---	---	---	142	136	31	3	3	92	92	539	---	2	7	20	97	19	6	139	290	819
Shenandoah City, -----	Schuylkill,	---	---	---	36	94	24	---	---	101	74	352	---	2	5	26	40	11	4	125	216	608
Giberton, -----		---	---	---	107	95	14	3	2	69	75	375	---	2	7	24	71	25	5	146	280	655
Knickerbocker, -----		---	---	---	61	52	15	3	2	52	57	246	---	1	6	21	34	12	5	103	182	428
Boston Run, -----		---	---	---	50	141	14	4	4	72	52	344	---	1	7	13	---	---	2	33	56	400
Indian Ridge, -----		---	---	---	---	---	---	---	---	---	---	---	---	1	4	6	14	5	2	92	124	124
Plank Ridge Washery, -----		---	---	---	---	---	---	---	---	---	---	---	---	1	4	6	14	5	2	92	124	124
Totals, -----		8	56	---	867	1,019	197	35	19	685	852	3,688	---	15	65	181	433	144	40	1,083	1,959	5,047
Lehigh Valley Coal Co.		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Packer No. 2, -----		1	3	1	67	53	13	3	4	---	54	199	---	1	3	12	---	---	1	23	40	239
Packer No. 3, -----	Schuylkill,	1	4	1	60	73	18	7	6	---	71	241	---	1	3	6	---	---	1	38	49	290
Packer No. 4, -----		1	3	2	94	26	16	4	4	---	35	185	---	1	2	18	35	34	4	209	329	514
Totals, -----		3	10	4	221	152	47	14	14	---	160	625	---	1	4	24	53	34	6	270	418	1,043
Thomas Colliery Co.		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Kehley Run, -----	Schuylkill,	1	1	3	143	69	16	6	6	69	---	314	---	1	14	28	64	10	5	154	276	590

Susquehanna Coal Co. William Penn, -----	1	6	155	50	88	1	7	125	7	435	1	1	19	26	66	12	6	111	242	677	
Brookwood Coal Co. Stanton, -----	1	1	11	9	2	-----	2	1	3	30	-----	1	2	12	13	2	1	43	74	104	
Gerber and Seaman Furnace, -----	1	1	32	27	5	1	2	17	-----	86	-----	1	1	6	4	27	1	1	21	62	148
Cambridge Coal Co. Cambridge, -----	1	1	25	32	3	1	-----	3	2	69	-----	1	1	2	6	6	3	1	8	28	97
H. H. Smith and Co. Hudson Washery, -----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	1	1	7	8	2	2	1	52	74	74
Brighton Coal Co. Brighton Washery, -----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	1	1	5	10	14	3	1	59	94	94
Oxford Coal Co. Oxford Washery, -----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	1	1	4	11	-----	7	1	71	96	96
Grand totals, -----	16	08	16	1,454	1,368	353	58	50	850	1,024	5,247	7	25	148	839	659	210	63	1,872	3,323	8,570

TABLE 3.—Part 2

Names of Operators and Collieries	County	Number of Days Worked in Breaker														
		January	February	March	April	May	June	July	August	September	October	November	December	Total		
Philadelphia and Reading Coal and Iron Co.																
West Shenandoah, -----		22	16	4	23	23	15	13	13	16	21	22	22	23	211	
Kohimoor, -----		22	15	10	23	24	16	12	14	18	21	22	22	21	218	
Turkey Run, -----	Schuylkill,	22	17	13	23	24	15	13	14	19	21	22	22	24	227	
Draper, -----		22	14	23	24	16	12	14	19	21	21	22	22	24	228	
Shenandoah City, -----		22	16	13	24	23	15	13	11	19	21	22	22	24	223	
Gilberton, -----		22	17	4	23	24	16	13	14	19	21	23	23	24	220	
Knickerbocker, -----		22	17	4	23	24	16	13	14	19	21	23	23	24	220	
Boston Run, -----		22	17	4	23	24	16	13	14	19	21	23	23	24	220	
Lehigh Valley Coal Co.																
Packer No. 2, -----		25	14	15	23	22	23	12	13	18	17	17	16	16	215	
Packer No. 3, -----	Schuylkill,	23	14	15	23	22	23	12	13	18	17	17	17	16	215	
Packer No. 4, -----		23	14	15	23	22	23	12	13	18	17	17	17	16	215	
Thomas Colliery Co.																
Kehley Run, -----	Schuylkill,	23	25	24	20	23	25	24	21	23	26	21	24	279		
Susquehanna Coal Co.																
William Penn, -----	Schuylkill,	19	17	15	21	20	22	12	14	19	13	13	15	200		
Brookwood Coal Co.																
Stanton, -----	Schuylkill,	24	24	26	18										164	
Gerber and Seaman																
Furnace, -----	Schuylkill,	19	16	10	22	23	14	13	15	18	21	21	24	216		
Cambridge Coal Co.																
Cambridge, -----	Schuylkill,	21	19	12	6	20	4	9	-----	9	17	15	18	150		

TABLE 4.—Fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Mine	County	Nature and Cause of Accident in Brief
Feb. 12	Mike Hoodock, -----	Greek,-----	Repairman, --	28	M.	1	1	Shenandoah City,--		<p>Killed by fall of slate. Found dead in an old breast where his duties did not take him.</p> <p>Killed by fall of rock. Died March 28. Partially burned by gas. They were working in No. 30 breast and had fired two holes. They were carrying a lighted piece of cotton up the manway to light another hole and were near the top of the manway when they ignited a body of gas and were severely burned. They died at the hospital April 11.</p> <p>Killed by fall of rock.</p> <p>Instantly killed. He attempted to oil the scraper line while it was in motion.</p> <p>Killed by fall of rock and timber. He was setting timber when a piece of rock fell, knocking out the timber.</p> <p>Killed by fall of rock two feet thick in center and feather edge all around, in Skidmore vein. The place was well propped, but the miners did not take the necessary precautions.</p> <p>Killed by fall of slate.</p> <p>Killed by fall of slate and coal. He was working in the gangway and after firing a shot in the face ran into the chute but while he was there a piece of coal and slate fell on him. The chute should have been timbered.</p>
	Adolph Washaway, --	Lithuanian,	Laborer, -----	33	M.	1	1	Shenandoah City,--		
April 8	William Bevens, -----	Lithuanian,	Miner, -----	27	S.	1	1	William Penn, ---		
8	Charles Krumpus, ---	Greek,-----	Miner, -----	28	M.	1	1	William Penn, ---		
June 2	Joseph Steckonus, ---	Lithuanian,	Miner, -----	30	S.	---	---	Shenandoah City,--		
12	Harold Habel, -----	American,--	Chute-tender,	15	S.	---	---	Brighton washery,		
17	Stiney Berneskie, ---	Lithuanian,	Miner, -----	28	S.	---	---	Shenandoah City,--	Shenaykill, ---	
26	Philip Cusacavage, --	Polish,-----	Miner, -----	---	M.	1	2	Kehley Run, -----		
26	Anthony Tholnosky, --	Polish,-----	Miner, -----	---	M.	1	3	Kehley Run, -----		
July 2	Adam Newarkie, -----	German,-----	Miner, -----	46	M.	1	9	West Shenandoah,		
7	Daniel Watelfish, ---	German,-----	Laborer, -----	23	S.	---	---	Kehley Run, -----		

TABLE 4.—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Mine	County	Nature and Cause of Accident in Brief
Aug. 3	Peter Lubinski,	Polish,	Miner,	27	M.	1		Knickerbocker,		Smothered by outburst of gas. They were working at the face of the breast, 182 feet from the gangway, when an outburst of gas took place, filling the breast with hundreds of carts of coal, breaking batteries and doors, blowing out timber and filling adjoining workings with gas. Their bodies were not recovered until the third day after the accident.
3	Jacob Kolich,	Polish,	Miner,	27	M.	1		Knickerbocker,		
28	James Flannery,	American,	Miner,	40	M.	1		Packer No. 2,	Schuylkill,	Fatally burned by gas in Mammoth vein. They were drilling a hole at the battery when a fall of coal occurred, bringing down a small body of gas, which exploded on reaching their naked lights and knocked Flannery down the chute. Kileur was badly burned and died September 4.
28	Andrew Kileur,	American,	Miner,	34	M.	1		Packer No. 2,		
Sept. 3	Brandon Howehuskie,	Polish,	Laborer,	28	S.			Shenandoah City,	Shenandoah	Fatally burned by gas. A fall in the old workings brought gas down on their naked lights. Gas had never been found in the old workings before. Died in hospital.
3	Mike Zember,	Polish,	Miner,	22	S.			Shenandoah City,		
12	Joe Stennams,	Polish,	Miner,	20	S.			Kehtley Run,		Fatally burned by black powder. He was making up a black powder shot with his naked lamp on his head, when a spark from the lamp ignited the powder.
Oct. 22	Lew Stuteavage,	Polish,	Miner,	21	S.			Packer No. 3,		Fatally burned by gas. A fall in the old workings brought gas down on his naked lamp.

Oct. 28	Anthony Paluskie, ---	Slavonian, ---	Miner, ---	30	M. 1	1	Boston Run, ---	<p>Killed by rush of coal. He went inside of the coal battery to place dynamite on a lump of coal, when a piece of coal fell and struck him. While he was going into the fan house at the top of the shaft of Holmes airway he lost his hold on the iron railing between the fan house and shaft and fell down the shaft.</p> <p>Brouskie was instantly killed and Razius fatally injured in No. 28 breast, East Buck Mountain gangway. They had been told to shoot down the top coal by the fire boss in the morning, but they disobeyed orders and the coal fell on them. They should have taken the coal down.</p> <p>Killed by fall of rock. He had fired a shot in the face of the breast and when he returned to the breast the rock fell on him.</p> <p>Fatally burned by gas. He was night fire boss. He went up an old traveling way where gas had never been found before and he ignited a body of gas. He died November 24.</p> <p>Killed by blast while trying to fire two holes at the same time. He had touched one squib and was lighting the other one when the first hole went off, killing him.</p> <p>Instantly killed by falling machinery. He was standing under a crown wheel when it broke and fell forty feet, him.</p> <p>Killed by fall of slate. He had tried to bar down a loose piece of slate but failed. He then started to work under it and while he was working it fell on him.</p> <p>Killed by rush of coal. He was working in the pitching breast when the face of the breast rushed away, filling and blocking the manway. He went down to the bottom and started up the manway, when the coal rushed down and caught him.</p>
31	William G. Thomas, ---	Welsh, ---	Fire-boss, ---	55	M. 1	2	Draper, ---	
Nov. 2	Joseph Brouskie, --- Martin Razius, ---	Lithuanian, --- Lithuanian, ---	Miner, --- Miner, ---	33 46	S. --- S. ---	--- ---	Kehey Run, --- Kehey Run, ---	
12	Alex Yodis, ---	Polish, ---	Miner, ---	40	M. 1	3	Paeker No. 4, ---	
18	John Bunn, ---	English, ---	Fire-boss, ---	58	M. 1	---	Shenandoah City, ---	
24	John Rutuskie, ---	Polish, ---	Miner, ---	45	M. 1	3	Turkey Run, ---	
24	Nicholas Whalen, ---	American, ---	Jig-boss, ---	36	S. ---	---	William Penn, ---	
Dec. 4	William Mokonus, ---	Polish, ---	Miner, ---	30	S. ---	---	Shenandoah City, ---	
5	William Trevathan, ---	American, ---	Miner, ---	21	S. ---	---	Boston Run, ---	

Schuykill, ---

TABLE 4.—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Mine	County	Nature and Cause of Accident in Brief
Dec. 18	Joe Matakus, -----	Lithuanian,	Miner, -----	22	S.	-----	-----	Draper, -----	Schuylkill, -----	Instantly killed by premature explosion of dynamite. He had drilled a one-foot hole in the slate and was charging it with dynamite. When he put in the last stick, containing the cap and fuse, it stuck in the hole. He was trying to force it to its place by placing his iron scraper against it and by pounding on the other end with a rock, when the dynamite exploded, killing him.

TABLE 5.—Non-fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Mine	County	Nature and Cause of Accident in Brief
Jan. 8	Joseph Smith, -----	Lithuanian, -----	Bottom-man, -----	28	S.	Turkey Run, -----		Thigh fractured. Caught by rolling timber.
8	John Gowlonsky, ---	Lithuanian, -----	Laborer, -----	23	S.	Kohinoor, -----		Leg broken and head and shoulder bruised by fall of slate.
11	William Willantis, ---	Lithuanian, -----	Slatepicker, -----	14	S.	Packer No. 4, -----		Arm and leg fractured; fell down chute. Outside.
29	John Navitsky, -----	Lithuanian, -----	Laborer, -----	22	S.	West Sheandoah, ---		Leg broken and hand lacerated. Struck by falling timber.
Feb. 6	James Butler, -----	English, -----	Timberman, -----	30	S.	Packer No. 3, -----		Hip sprained and body bruised by car. He was riding down the slope when the door of the car opened and he fell out on the slope.
Mar. 2	Enoch Jones, -----	Welsh, -----	Miner, -----	47	M.	William Penn, -----		Ribs broken and shoulder injured by fall of frozen earth.
9	Frank Maltaine, -----	Italian, -----	Laborer, -----	45	M.	Oxford washery, ---	Schuylkill, -----	Three fingers blown off by premature explosion of dynamite. Outside.
18	Edward Kanter, -----	American, -----	Driver, -----	30	M.	Kelley Run, -----		Collar bone broken; squeezed by cars.
19	George Gropsky, -----	Lithuanian, -----	Laborer, -----	47	M.	Sheandoah City, ---		Leg broken by fall of slate.
25	Frank Schuttz, -----	American, -----	Repairman, -----	33	S.	Kelley Run, -----		Leg broken. Struck by falling timber.
27	George Lenetis, -----	Polish, -----	Miner, -----	46	M.	Kelley Run, -----		Pelvis bone fractured by fall of coal.
April 10	Albert Tanner, -----	American, -----	Driver, -----	17	S.	Poston Run, -----		Body bruised. Fell under cars.
May 5	Anthony Karatavage, -----	Lithuanian, -----	Miner, -----	43	M.	Draper, -----		Arm blown off by premature explosion of dynamite.
5	John Savage, -----	Lithuanian, -----	Miner, -----	40	M.	Draper, -----		Leg broken by fall of coal.
14	Adam Andruceavage, ---	Polish, -----	Laborer, -----	25	S.	Turkey Run, -----		Leg fractured and body bruised by fall of rock.
18	Adam Cunriskie, -----	Lithuanian, -----	Miner, -----	40	S.	Packer No. 4, -----		Back broken by fall of coal.
25	Michael Changoes, -----	Lithuanian, -----	Miner, -----	29	S.	William Penn, -----		Burned by gas.
June 1	Michael Pool, -----	American, -----	Driver, -----	35	M.	Packer No. 2, -----		Leg broken by rush of coal.
July 1	Louis Kline, -----	German, -----	Miner, -----	50	M.	Knickerbocker, ---		Leg broken. Struck by car on slope.
22	Anthony Lutto, -----	Polish, -----	Miner, -----	26	S.	Sheandoah City, ---		Burned by gas.

TABLE 5.—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Mine	County	Nature and Cause of Accident in Brief
July 30	Walter Seddon, -----	Polish, -----	Laborer, -----	30	S.	Gilberton, -----		Face and hands burned by gas.
Aug. 3	Andrew Palese, -----	Polish, -----	Laborer, -----	30	S.			Ribs broken: fell from platform.
10	John Amos, -----	German, -----	Miner, -----	58	M.	Kehley Run, -----		Burned by gas.
10	Patrick Birmingham, -----	Irish, -----	Miner, -----	35	M.	Furnace, -----		Skull fractured. Found unconscious.
10	Stiney Draginsky, -----	Polish, -----	Laborer, -----	25	S.			Cause unknown. Outside.
19	Walter Jones, -----	Welsh, -----	Slatepicker, -----	15	S.	Shenandoah City, -----		Burned by gas.
28	John Rilcufsky, -----	Lithuanian, -----	Laborer, -----	38	M.	Packer No. 2, -----		Leg broken by fall of slate.
Sept. 30	Adam Chustock, -----	Polish, -----	Laborer, -----	22	S.	Shenandoah City, -----		Leg broken. Caught by falling bank.
Oct. 7	James Montane, -----	Italian, -----	Laborer, -----	23	S.	Packer No. 3, -----	Schuylkill, -----	Outside.
21	Michael Hardy, -----	Lithuanian, -----	Laborer, -----	22	S.	Packer No. 2, -----		Leg broken by fall of slate.
Nov. 13	Frank Nadusky, -----	Polish, -----	Breaker-boy, -----	15	S.	Draper, -----		Foot smashed. Caught in roller cogs.
14	Claude Timmins, -----	American, -----	Laborer, -----	24	S.	Draper, -----		Arm broken. Caught by belt wheel.
Dec. 13	Harry Kessler, -----	American, -----	Engineer, -----	48	S.	Draper, -----		Skull fractured. Struck by falling timber. Outside.
16	Christ Foltz, -----	American, -----	Carpenter, -----	45	M.	Kohinoor, -----		Wrist, body and elbow cut. Caught by circular saw. Outside.
16	Frank Kankus, -----	Polish, -----	Miner, -----	45	M.	Shenandoah City, -----		Face and hands burned by gas.
16	Frank Losch, -----	Polish, -----	Laborer, -----	22	S.			Face and hands burned by gas.
18	Dominic Ambrosavage, -----	Lithuanian, -----	Miner, -----	28	S.	Draper, -----		Face and hands burned by gas.

CONDITION OF COLLIERIES

PHILADELPHIA AND READING COAL AND IRON COMPANY

Shenandoah City.—Ventilation and drainage good.

Draper.—Ventilation and drainage good; general condition as to safety good.

Turkey Run.—Ventilation in all new workings very good; drainage good; condition as to safety good.

Gilberton.—Ventilation in new workings good; old portions of mine fair. Drainage fair.

Knickerbocker.—Ventilation and drainage very good.

Boston Run.—Ventilation and drainage good.

West Shenandoah.—Ventilation and drainage good.

Kohinoor.—Ventilation in general good; in portions now being robbed fair. Drainage good.

Indian Ridge.—Ventilation fair; drainage good. The principal work done at this colliery is robbing.

LEHIGH VALLEY COAL COMPANY

Packer No. 2.—Ventilation and drainage fair.

Packer No. 3.—Ventilation and drainage fair.

Packer No. 4.—Ventilation and drainage fair.

SUSQUEHANNA COAL COMPANY

William Penn.—Ventilation and drainage fair. Many improvements are being made at this colliery which will increase the ventilation.

THOMAS COLLIERY COMPANY

Kehley Run.—Ventilation good; drainage in new portion of mine good; in old part fair.

CAMBRIDGE COAL COMPANY

Cambridge.—Ventilation good; drainage fair.

BROOKWOOD COAL COMPANY

Stanton.—Ventilation and drainage good.

GERBER AND SEAMAN

Furnace.—Ventilation and drainage fair.

IMPROVEMENTS

PHILADELPHIA AND READING COAL AND IRON COMPANY

West Shenandoah.—Haulage and drainage tunnel through Saddle to Turkey Run Colliery, 1,074 2-3 yards. Tunnel from Mammoth to Skidmore on the 4th Lift plane level, north dip, 11 2-3 yards. Tunnel from Skidmore to Mammoth on the 3rd Lift north Dip Skidmore, 30 yards.

Turkey Run.—No. 5 Slope in Mammoth vein sunk from surface, 317 2-3 yards.

No. 6 Slope in Top Split vein sunk from surface, 202 yards.

Saw-mill on timber wharf. Tunnel from Bottom Split to Top Split on the 2nd Lift (now West Shenandoah, 5th Lift) 79 2-3 yards. Electric force fan to ventilate No. 8 slope workings.

Air tunnel from Buck Mountain to Top Split to ventilate mine workings on 2nd Lift (now West Shenandoah, 5th Lift) 157 yards.

Shenandoah City.—New air shaft 12 x 12 x 432 feet deep. Standard supply store house.

Indian Ridge.—Reopening Knickerbocker No. 3 slope in Holmes vein, 163 yards.

Draper Colliery.—Two new tubular boilers Nos. 11 and 12 added to the east side of old boiler plant, with house. Standard supply store house.

Tunnel to Little Tracey vein from Tracey Counter at Breast No. 0-32 2-3 yards. Underground slope across pitch westward in Skidmore vein from No. 4, 74 yards to be used for remining the Mammoth vein.

Gilberton.—Tunnel to Buck Mountain vein from Skidmore vein, 5th Lift, 70 2-3 yards. Tunnel to Little Buck vein from East Buck Mountain, 5th Lift, at Breast No. 30, 18 yards.

Air tunnel to Buck Mountain vein from the Seven Foot Monkey gangway, 5th Lift, 35 2-3 yards.

Ten inch bore hole for steam from surface to Little Buck vein, 4th Lift, 816 yards.

Tunnel to Top Split vein from East Skidmore gangway, 5th Lift, 14 yards.

Boston Run.—An underground slope in Little Buck vein from the 3rd to the 4th Lifts, with an airway alongside of it, each 100 yards long was completed.

Knickerbocker.—A tunnel to Skidmore vein, north dip, with landing off Buck Mountain underground slope, was completed; total length, 99 2-3 yards.

A traffic tunnel to Buck Mountain vein from Seven Foot vein, south dip, 1st Lift, at breast No. 46, was completed; total length, 43 1-3 yards. A traffic tunnel to Buck Mountain vein from Seven Foot vein, south dip, 1st Lift, at breast No. 70 was completed; total length, 44 1-3 yards.

LEHIGH VALLEY COAL COMPANY

Packer No. 2.—A drift opened on the Buck Mountain vein west of the No. 2 slope. This drift has been driven westward and has broken into the workings from the 2nd level and affords another outlet from this section of the mine in case of accident. A 24 x 10 x 36 inch Goyne pump placed on the 2nd lift. Continued the work of opening the 5th level Mammoth and of driving a 7 x 10 foot tunnel from the bottom split of the Mammoth to the Skidmore vein, a distance of 40 feet, in order to reach the West Mammoth gangway.

The east and west top split Mammoth continued, and east bottom split Mammoth.

An outlet made on the 2nd level east Orchard to the surface at No. 16 breast; also an outlet made on the west Orchard at No. 25 breast.

Packer No. 3.—A 7 x 10 foot tunnel driven from the 2nd level, West Buck Mountain, to the Little Buck vein, a distance of 77 feet, and mining started in the Little Buck Mountain from east to west gangways from this tunnel.

Packer No. 4.—Outside. A set of 10 x 18 inch elevators installed at the boiler house. A new 20 ton locomotive put in service. Refuse plane erected to a 60 foot higher elevation, and the plane extended 200 feet north, and one pair of 18 x 36 inch hoisting engines placed at head of new refuse plane. Built stone walls to replace cribbing.

Inside. An outlet driven in the first level, West Seven Foot to surface at breast No. 6. New airway driven in Seven Foot vein from 3rd level to 1st level, which very materially increases the ventilation. Tunnel driven from the Skidmore to the Mammoth vein at breast No. 22, a distance of 59 feet.

East Orchard 2nd Level.—Outlet driven from counter gangway to the surface. Rock chute driven from east Primrose to the Orchard at breast No. 36. Have continued the mining of the Mammoth vein through West Skidmore vein, 3rd level, by driving rock holes from Skidmore to Mammoth.

THOMAS COLLIERY COMPANY

Kehley Run, Outside.—Erected at No. 3 Slope, at eastern end of property, one 16 x 30 inch double hoisting engine. One 200 H. P. boiler all enclosed in frame building. Railing extended from No. 3 stripping to head of this new slope. Supply plane built from head of breaker to level of Reading Railroad on which the timber and supplies are hauled up and placed on head of slope and taken therefrom as wanted. Scraper line on culm bank extended and engine placed for running the conveyor line separate. Ash conveyor installed in front of the boilers and elevator erected at the west end for the purpose of elevating it to pocket from which place it is loaded in dump cars. Large water tank erected east of the main slope hoisting engine house, about 22 feet higher than slope mouth, with a capacity of about 40,000 gallons, from which mine water is distributed through the breaker for the purpose of washing the coal. Extended throughout the breaker a 4 inch fire-protection line connected to a No. 10 Plunger pump, which is connected to the tank above mentioned from which a sufficient supply of water can be put on any outside buildings. A separate shop erected for pipe-cutting and bolt-cutting, equipped with a pipe-cutting machine and a bolt-cutting machine.

Inside.—Inside Buck slope driven to fourth level; gangways opened east and west. Extended a new slope known as No. 3, east end of property, in the Buck Mountain vein up to the 1st of January, 1909, 350 feet from which was driven one gangway east and west. One of the old fans was changed, converting it into an exhaust instead of a force fan. Changes also made inside to air courses to maintain a down-current on the main slope, but at about two minutes notice the changes can be made and the slope becomes neutral.

SUSQUEHANNA COAL COMPANY

William Penn Colliery.—50 new mine cars. Ingersoll Duplex compressor and air line. Force fan and airway for Primrose Seam. 50,000 gallon emergency water tank. Main elevators in breaker. Engine and house for Holmes plane. Two new concrete air bridges. Emergency Hospitals on all levels, constructed of concrete and wood. 3,550 feet of Monkey heading reopened and retimbered. Extensive repairs to breaker coal plane. Steam line from boiler house to Mammoth fan. Airway driven from Bottom Lift to surface of Skidmore vein.

MINE FOREMEN'S EXAMINATIONS

The annual examination of applicants for certificates of qualification as Mine Foremen and Assistant Mine Foremen was held in the Court House, Pottsville, June 19 and 20.

The Board of Examiners was composed of the following members: A. B. Lamb, Inspector, Shenandoah; D. V. Randall, Superintendent, William Penn; George H. Young, Miner, Shenandoah, and George W. Keller, Miner, Ashland.

The following persons passed a satisfactory examination and were granted certificates:

Mine Foremen

William Roland and Edmund J. Thomas, Shenandoah; Patrick J. Coyle, Thomas Jordan and David J. Williams, Lost Creek.

Assistant Mine Foremen

Thomas Shappell, William Dougherty and Mike Bolick, Shenandoah; Elias Hopkins, S. J. Chipakitis and Walter McGuire, William Penn; J. B. Newton, Girardville; T. J. English, Mahanoy City; Jacob Zimmermar, Gilberton.

Fourteenth District

COLUMBIA AND SCHUYLKILL COUNTIES

Centralia, Pa., February 27, 1909.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor of transmitting herewith my annual report as Inspector of the Fourteenth Anthracite District for the year ending December 31, 1908.

Respectfully submitted,

JAMES A. O'DONNELL, Inspector.

SUMMARY OF STATISTICS

Number of collieries,	10
Number of mines,	26
Number of mines in operation,	26
Number of tons of coal shipped to market,	2,217,497
Number of tons used at mines for steam and heat,	271,685
Number of tons sold to local trade and used by employes,	36,367
Number of tons produced,	2,525,549
Number of tons produced by compressed air machines, ..	—
Number of tons produced by electrical machines,	—
Number of persons employed inside of mines,	3,760
Number of persons employed outside,	2,167
Number of fatal accidents inside of mines,	12
Number of fatal accidents outside,	4
Number of non-fatal accidents inside of mines,	42
Number of non-fatal accidents outside,	14
Number of tons of coal produced per fatal accident inside, ..	210,462
Number of persons employed per fatal accident inside, ..	313
Number of persons employed per fatal accident outside, ..	542
Number of persons employed per non-fatal accident inside, ..	89
Number of persons employed per non-fatal accident outside, ..	154
Number of wives made widows,	7
Number of children orphaned,	15
Number of steam locomotives used outside,	21
Number of compressed air locomotives used inside,	4
Number of electric motors used inside,	9
Number of fans in use,	21
Number of furnaces in use,	—
Number of gaseous mines in operation,	14
Number of non-gaseous mines in operation,	12
Number of new mines opened,	3
Number of old mines abandoned,	3

TABLE A

PRODUCTION OF COAL

Names of Operators	Tons
Philadelphia and Reading Coal and Iron Company,	1,156,454
Lehigh Valley Coal Company,	733,964
Midvalley Coal Company,	344,469
Girard Mammoth Coal Company,	154,961
W. R. McTurk Coal Company,	132,770
Dreshman Coal Company,	2,931
Total,	<u>2,525,549</u>

Production by Counties

Schuylkill,	1,469,901
Columbia,	1,055,648
Total,	<u>2,525,549</u>

TABLE B.—Fatal and non-fatal accidents inside and outside of mines; number of tons of coal produced per accident; number of persons employed; number employed per accident

Names of Operators	Fatal Accidents			Non-fatal Accidents			Tons of coal produced per fatal accident inside	Tons of coal produced per non-fatal accident inside	Number of employees inside	Number of employees outside	Total number of employees	Fatal accident		non-fatal accident	
	Inside	Outside	Total	Inside	Outside	Total						Number of employees inside per fatal accident	Number of employees outside per fatal accident	Number of employees inside per non-fatal accident	Number of employees outside per non-fatal accident
Philadelphia and Reading Coal and Iron Co., -----	3	2	5	5	9	35	385,485	44,479	1,870	1,190	3,060	623	595	72	132
Lehigh Valley Coal Co., -----	4	1	5	12	3	15	188,491	61,164	1,745	384	1,529	286	384	95	128
Midvalley Coal Co., -----	3	1	4	3	3	3	114,823	114,823	474	264	738	158	264	158	
Girard Mammoth Coal Co., -----	2		2	1		1	77,480	154,961	165	164	329	82		165	
W. R. McFurk Coal Co., -----					2	2			97	162	259				81
Miscellaneous companies, -----									9	3	12				
Totals and averages for district,-----	12	4	16	42	14	56	210,462	60,132	3,760	2,167	5,927	313	542	89	154

TABLE C.—Classification of Fatal Accidents Inside and Outside of Mines

	Months												Totals	Percentages		
	January	February	March	April	May	June	July	August	September	October	November	December				
Causes of Accidents Inside																
Falls of coal, -----	1									1					2	16.67
Falls of roof, -----	1							1		1					3	25.00
Mine cars, -----				1	2		1								4	33.34
Explosions of powder and dynamite, -----			1						1						1	8.33
Premature blasts, -----															1	8.33
Miscellaneous, -----		1													1	8.33
Totals, -----	2	1	1	1	2		2		2	1				12	100.00	
Causes of Accidents Outside																
Cars, -----			1		1	1									3	75.00
Machinery, -----		1													1	25.00
Totals, -----		1	1		1	1								4	100.00	
Grand totals inside and outside, -----	2	2	2	1	3	1	2		2	1				16		

TABLE D.—Classification of Non-fatal Accidents Inside and Outside of Mines

	Months												Totals	Percentages	
	January	February	March	April	May	June	July	August	September	October	November	December			
Causes of Accidents Inside															
Falls of coal, -----	1		1	1	2		1		1		1	3		11	26.19
Falls of slate, -----						1						1		1	2.38
Falls of roof, -----						1					1			2	4.76
Mine cars, -----			2		1	1		1		1				6	14.29
Explosions of gas and dust, -----					5			2	1	4				12	28.57
Explosions of powder and dynamite, -----	1													1	2.38
Premature blasts, -----	1													1	2.38
Crushed at batteries, -----		1				1						1	3	7.15	
Miscellaneous, -----				1	1				2			1	5	11.90	
Totals, -----	3	1	3	2	9	2	2	3	4	5	2	6	42	100.00	
Causes of Accidents Outside															
Cars, -----	1					1		1	1		1	1	4	28.57	
Machinery, -----										1			4	28.57	
Miscellaneous, -----	1	1	1	1	1				1				6	42.86	
Totals, -----	2	1	1	1	1	1		1	2	1	2	1	14	100.00	
Grand totals inside and outside, -----	5	2	4	3	10	3	2	4	6	6	4	7	56		

TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Miners, -----		1					2		1	1			5
Miners' laborers, -----	1												1
Drivers and runners, -----	1				2								3
All other employes, -----			1	1					1				3
Totals, -----	2	1	1	1	2		2		2	1			12
Outside													
Blacksmiths and carpenters, -----					1								1
All other employes, -----		1	1			1							3
Totals, -----		1	1		1	1							4
Grand totals inside and outside,--	2	2	2	1	3	1	2		2	1			16

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Miners, -----	2	1	1	2	6	1	1		3	4		2	24
Miners' laborers, -----					1	1		2	1		1	2	7
Drivers and runners, -----			2		1	1							4
All other employes, -----	1				1		1		1			2	7
Totals, -----	3	1	3	2	9	2	2	3	4	5	2	6	42
Outside													
Blacksmiths and carpenters, -----									1				1
Slatepickers (boys), -----	1				1			1					3
All other employes, -----	1	1	1	1		1		1	1	1	2	1	10
Totals, -----	2	1	1	1	1	1		1	2	1	2	1	14
Grand totals inside and outside,--	5	2	4	3	10	3	2	4	6	6	4	7	56

TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												Totals	
	January	February	March	April	May	June	July	August	September	October	November	December		
American, -----				1	2									3
English, -----									1					1
Polish, -----		2					1							3
Italian, -----					1						1			2
Slavonian, -----	2		1											3
Lithuanian, -----			1				1							2
Russian, -----						1			1					2
Totals, -----	2	2	2	1	3	1	2		2	1				16

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

	Months												Totals	
	January	February	March	April	May	June	July	August	September	October	November	December		
American, -----	3		2	1	5	2	1	2	2	4	2	3		27
English, -----				1	2		1	1	3			1		9
Irish, -----		1				1						1		4
Polish, -----		1	1					1			1	1		4
Italian, -----	1										1			2
Slavonian, -----	1	1			1							1		3
Lithuanian, -----					2					2	1	1		6
Russian, -----					2									2
Totals, -----	5	2	4	3	10	3	2	4	6	6	4	7		56

TABLE 1.—Operators, location of collieries, railroads, etc.

Names of Operators and Collieries	County	Name of General Superintendent	Post Office	Name of Superintendent	Post Office	Railroad to Mine
Philadelphia and Reading Coal and Iron Co.	Schuylkill, Columbia, Schuylkill, Schuylkill,	W. J. Richards	Pottsville	Reese Tasker	Pottsville	P. and R.
Lehigh Valley Coal Co.	Columbia, Schuylkill, Columbia,	S. D. Warriner	Wilkes-Barre	J. M. Humphrey	Centralia	Lehigh Valley
Midvalley Coal Co.	Columbia	J. S. Wentz	Philadelphia	T. E. Snyder	Wilburton	Lehigh Valley
Girard Mammoth Coal Co.	Schuylkill			H. K. Christ	Mahanoy City	P. and R.
W. R. McTurk Coal Co.	Schuylkill	W. R. McTurk	Philadelphia	Jacob M. Holt	Girardville	P. and R.
Girard-Bear Ridge,						
Pioneer,	Schuylkill	John Dreshman	Ashland			

TABLE 2.—Number of tons of coal mined, number of days worked, number of persons employed, number killed and injured, quantity of powder and dynamite used, etc.

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Number of kegs of powder used	Number of pounds of dynamite used	Number of horses and mules
Philadelphia and Reading Coal and Iron Co.												
Hammond, -----	Schuylkill, -----	349,519	29,984	8,169	387,672	228	1,047	3	18	2,702	150,442	47
Potts, -----	Columbia, -----	241,968	47,123	7,494	296,585	229	788	1	11	-----	93,400	93
Bast, -----	Schuylkill, -----	273,249	56,984	6,852	337,085	237	834	1	5	19	95,140	92
Bear Ridge, -----	Schuylkill, -----	117,775	16,005	1,331	135,112	225	391	1	1	472	23,824	53
Totals, -----		982,511	150,097	23,846	1,156,454	-----	3,060	5	35	3,193	362,806	285
Centralia, -----	Columbia, -----	364,860	43,916	5,818	414,594	212	865	3	10	2,882	50,952	82
Packer No. 5, -----	Schuylkill, -----	302,311	17,059	-----	319,370	216	643	2	5	4,423	69,596	76
Locust Run, -----	Columbia, -----	-----	-----	-----	-----	-----	21	-----	-----	-----	-----	2
Totals, -----		667,171	60,975	5,818	738,964	-----	1,529	5	15	7,305	120,548	160
Midvalley Coal Co.												
Midvalley, -----	Columbia, -----	304,853	36,500	3,116	344,469	216	738	4	3	2,408	132,108	127
Girard Mammoth Coal Co.												
Girard Mammoth, -----	Schuylkill, -----	141,771	12,000	1,190	154,961	250	329	2	1	1,740	25,795	25
Girard-Bear Ridge, -----	Schuylkill, -----	121,191	11,563	16	132,770	255	259	-----	2	80	26,250	28
Pioneer, -----	Schuylkill, -----	-----	550	2,381	2,931	275	12	-----	-----	-----	600	4
Grand totals, -----		2,217,497	271,685	36,367	2,525,549	-----	5,927	16	56	14,756	668,108	629

TABLE 2.—Part 2

Names of Operators	County	Number of Boilers				Locomotives			Number of steam engines of all classes	Total horse power	Number of pumps delivering water to surface	Capacity in gallons per minute	Quantity delivered to surface per minute—gallons	Number of electric dynamos	Number of air compressors
		Cylindrical	Horse power	Tubular	Horse power	Total horse power	Steam	Air								Electric
Philadelphia and Reading Coal and Iron Co.,	Schuylkill, and Columbia,	24	974	52	6,760	7,734	6	4	61	7,457	17	21,200	14,950	---	3
Lehigh Valley Coal Co.,	Schuylkill, and Columbia,	15	555	25	3,900	4,455	5	---	63	7,772	5	9,618	5,346	2	1
Midvalley Coal Co.,	Columbia,	---	---	16	3,000	3,000	4	---	10	889	7	7,830	7,830	---	1
Girard Mammoth Coal Co.,	Schuylkill,	---	---	4	500	500	3	---	3	75	2	3,060	1,000	---	---
W. R. McTurk Coal Co.,	Schuylkill,	---	---	9	1,312	1,312	3	---	15	995	---	---	---	---	---
Dreshman Coal Co.,	Schuylkill,	1	30	1	100	130	---	---	2	70	---	---	---	---	---
Totals,	---	40	1,559	107	15,572	17,131	21	4	157	17,258	31	41,648	29,126	2	5

Table 3.—Number of each class of employees inside and outside of mines

Names of Operators and Collieries	County	Inside										Outside						Grand total inside and outside				
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Doorboys and helpers	Pumpmen	Company men	All other employees	Total inside	Superintendents	Foremen	Blacksmiths and carpenters	Engineers and firemen	State pickers (boys)		State pickers (men)	Bookkeepers and clerks	All other employees	Total outside
Philadelphia and Reading Coal and Iron Co.	Schuylkill, -----	1	8	---	167	33	11	4	127	134	647	---	2	12	29	87	33	4	233	400	1,047	
Hammond, -----	Columbia, -----	2	8	---	106	34	28	4	142	134	481	---	2	8	25	62	23	5	182	307	788	
Potts, -----	Schuylkill, -----	2	10	---	100	30	30	4	174	122	522	---	1	9	28	30	22	5	207	312	834	
Bear Ridge, -----	Schuylkill, -----	1	1	---	60	15	3	2	36	39	220	---	1	6	16	30	10	3	96	171	391	
Totals, -----		6	27	---	428	303	112	14	479	429	1,870	---	7	35	88	227	88	17	718	1,190	3,060	
Lehigh Valley Coal Co.	Columbia, -----	5	7	---	226	132	47	2	168	596	---	3	21	30	29	3	3	180	269	865		
Centralia, -----	Schuylkill, -----	1	8	---	145	30	10	3	---	157	541	---	1	12	11	---	---	74	102	643		
Packer No. 5, -----	Columbia, -----	---	---	---	---	---	---	---	---	6	8	---	1	---	5	---	---	---	7	13	21	
Loeust Run, -----		6	15	---	371	318	77	7	---	331	1,145	---	5	33	49	29	3	4	261	384	1,529	
Totals, -----		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
Midvalley Coal Co.	Columbia, -----	2	2	---	190	130	59	11	53	15	474	---	1	2	16	24	62	42	5	112	264	738
Girard Mammoth Coal Co.	Schuylkill, -----	2	1	---	40	56	10	4	28	22	165	---	1	---	5	14	22	19	2	101	164	329
Girard Mammoth, -----		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	

*Pumping station.

Table 3 —Continued

Names of Operators and Collieries	County	Inside											Outside								Grand total inside and outside
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Doorboys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Foremen	Blacksmiths and carpenters	Engineers and firemen	State pickers (boys)	State pickers (men)	Bookkeepers and clerks	All other employes		Total outside
W. R. McTurk Coal Co. Girard-Bear Ridge,	Schuylkill,	1	1	1	31	24	8	5	27	97	1	2	9	12	39	2	97	162	259		
Dreshman Coal Co. Pioneer,	Schuylkill,	1			2	1	2			3	9			1	1	1	1	3	1,289	12	
Grand totals,		18	45	8	1,062	832	268	111	29	587	800	3	16	98	380	153	30	1,289	2,167	5,927	

TABLE 3.—Part 2

Names of Operators and Collieries	County	Number of Days Worked in Breaker												Total	
		January	February	March	April	May	June	July	August	September	October	November	December		
Philadelphia and Reading Coal and Iron Co.	Schuylkill, -----	22	16	14	23	24	16	13	14	19	21	23	23	23	298
Hammond, -----	Columbia, -----	22	16	15	23	24	16	13	14	19	20	23	23	24	230
Potts, -----	Schuylkill, -----	22	16	23	23	23	16	13	14	19	21	23	23	24	237
Bast, -----	Schuylkill, -----	21	15	12	23	24	16	13	14	19	21	23	23	24	235
Bear Ridge, -----															
Lehigh Valley Coal Co.	Columbia, -----	24	12	9	23	23	25	12	12	18	19	20	15	15	242
Centralia, -----	Schuylkill, -----	25	15	15	23	22	23	12	13	18	17	17	16	16	246
Packer No. 5, -----															
Midvalley, -----	Columbia, -----	25	16	12	23	23	25	12	12	18	19	15	16	16	246
Girard Mammoth, -----	Schuylkill, -----	18	22	23	20	22	25	23	15	21	17	21	23	23	250
W. R. McTurk Coal Co.	Schuylkill, -----	24	22	21	22	22	22	21	21	23	18	18	21	21	255
Girard-Bear Ridge, -----															
Pioneer, -----	Dreshman Coal Co.	22	22	22	20	23	26	21	25	24	22	23	25	25	275

TABLE 4.—Fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Mine	County	Nature and Cause of Accident in Brief
Jan. 24	George Kashitsko, ---	Slavonian,	Laborer, ----	25	S.	---	---	Midvalley, ----	Columbia, ----	Instantly killed by fall of coal off the rib while shoveling coal into a chute.
24	Michael Stenceavage, -	Slavonian,	Runner, ----	18	S.	---	---	Packer No. 5, ----	Schuykill, ----	Instantly killed by fall of top rock. He went in beyond the point where the pillars had been removed. The miners warned him not to do so.
Feb. 17	Frank Orluskie, ----	Polish, ---	Miner, ----	46	M.	1	1	Midvalley, ----	Columbia, ----	Instantly killed by rush of coal and water from the top heading of the outside breast while going up the breast manway. The outside breast fell through to the surface where there was a spring of water in the ground.
24	Paul Podomanski, --	Polish, ---	Platorman, ----	40	M.	1	6	Hammond, ----	Schuykill, ----	Instantly killed. He was pushing coal in a chute with a rake. The rake was caught and he was knocked into the machinery. Outside.
Mar. 4	Frank Molexia, ----	Slavonian,	Tipman, ----	19	S.	---	---	Bear Ridge, ----	Schuykill, ----	Instantly killed by cars. He removed the sprags from the wheels of a trip of cars, and while pushing the front car in to the chain hoist the other cars followed and he was bumped between them. Outside.
11	Charles Klemis, ----	Lithuanian,	Timberman, -	30	S.	---	---	Hammond, ----	Schuykill, ----	Fatally injured by blast. Died the same day. He charged two holes in the bottom slate. He then applied a match to one fuse and was in the act of lighting the second when the first charge went off as he was standing over it.

April 24	Patrick McDonald, ---	American, ---	Starter, ---	45	S.	Bast, ---	Schuylkill, ---	Fatally injured by cars. Died the same day. He was sitting on the track and the loaders told him that they were going to push a loaded car out, but for some reason he remained on the track until the car was pushed on top of him.
May 5	James Flanigan, ---	American, ---	Runner, ---	19	S.	Centralia, ---	Columbia, ---	Instantly killed by cars. While uncoupling cars on the bottom of the chain hoist, the front car unhooked from the chain and his head was caught between the cars.
13	Frank Peat, ---	Italian, ---	Driver, ---	21	S.	Girard Mammoth, ---	Schuylkill, ---	Instantly killed by being squeezed between derailed car and timber.
29	Peter Raker, ---	American, ---	Car-repairer, ---	65	M. 1	1 Midvalley, ---	Columbia, ---	Fatally injured. Died the same day. He was riding on a truck in front of the locomotive. The truck was bumped by the locomotive, and he fell off and was caught under the frame of the locomotive. Outside.
June 20	Michael Buckshon, ---	Russian, ---	Laborer, ---	30	M. 1	Centralia, ---	Columbia, ---	While dumping cars loaded with clay his head was caught between the box and truck of the car. Outside.
July 13	Michael Bubes, ---	Polish, ---	Miner, ---	38	M. 1	4 Midvalley, ---	Columbia, ---	Instantly killed by fall of rock, while running coal out of a battery near the face of his breast.
28	William Rogarrish, ---	Lithuanian, ---	Miner, ---	30	S.	Centralia, ---	Columbia, ---	Instantly killed. While dumping a mine buggy his head was caught between the top of the buggy and the top slate.
Sept. 12	Michael Marcheck, ---	Russian, ---	Miner, ---	29	M. 1	1 Packer No. 5, ---	Schuylkill, ---	Instantly killed by the explosion of a box cap out of the box with a lighted lamp on his head, and a spark from his lamp fell into the box.
15	William Caton, ---	English, ---	Switchman, ---	20	S.	Hammond, ---	Schuylkill, ---	Instantly killed. He was riding on the rear car of a trip of cars hauled by a motor. The door of the car in front of the rear car came open and the coal rolled out on the track and derailed the rear car and displaced the timbers, which with the top coal fell on him.
Oct. 13	Guy Burno, ---	Italian, ---	Miner, ---	32	M. 1	2 Girard Mammoth, ---	Schuylkill, ---	Instantly killed. While he was mining the bottom bench of coal the top bench fell on him.

TABLE 5.—Non-fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Mine	County	Nature and Cause of Accident in Brief
Jan. 6	Alex Donaldson, -----	American,-----	Miner,-----	32	S.	Packer No. 5,-----	Schuylkill,-----	Ankle broken by fall of coal.
9	William Vaughan,-----	American,-----	Starter,-----	28	M.	Potts,-----	Columbia,-----	Hand lacerated by dynamite explosion.
13	Carrol Thndo,-----	Italian,-----	Laborer,-----	45	M.	Hammond,-----	Schuylkill,-----	Leg fractured by lump of coal rolling on him. Outside.
20	Alfred Green,-----	American,-----	Slatepicker,-----	15	S.	Hammond,-----	Schuylkill,-----	Legs crushed by machinery. Outside.
27	John Renuis,-----	Slavonian,-----	Miner,-----	28	S.	Packer No. 5,-----	Schuylkill,-----	Face lacerated and burned by premature blast.
Feb. 17	Lewis Glowatski,-----	Polish,-----	Miner,-----	39	M.	Midvalley,-----	Columbia,-----	Rib fractured by rush of coal.
20	Sam Yellick,-----	Slavonian,-----	Laborer,-----	23	S.	Bear Ridge,-----	Schuylkill,-----	Leg fractured by lump of frozen cull falling on him. Outside.
Mar. 3	Lawrence Murphy,-----	American,-----	Driver,-----	23	S.	Packer No. 5,-----	Schuylkill,-----	Arm crushed between top of car and timber.
4	Dan Curley,-----	American,-----	Driver,-----	18	S.	Hammond,-----	Schuylkill,-----	Pelvis fractured and hip dislocated by cars.
12	Anthony Gaughan,-----	Irish,-----	Miner,-----	30	M.	Centralla,-----	Columbia,-----	Head lacerated. Knocked down breast by fall of coal.
25	Nicholas Cadart,-----	Italian,-----	Laborer,-----	24	S.	Girard-Bear Ridge,-----	Schuylkill,-----	Leg fractured by fall of rock in stripping. Outside.
April 11	James Splain,-----	American,-----	Miner,-----	43	M.	Bast,-----	Schuylkill,-----	Foot fractured by fall of coal.
13	Michael Silk,-----	Irish,-----	Laborer,-----	48	S.	Bast,-----	Schuylkill,-----	Arm fractured by car door falling on him. Outside.
23	Thomas Mooney,-----	Irish,-----	Miner,-----	47	M.	Bast,-----	Schuylkill,-----	Head and face lacerated by outburst of coal.
May 4	John McChifsky,-----	Lithuanian,-----	Miner,-----	25	M.	Hammond,-----	Schuylkill,-----	Head, face and hands burned by gas.
4	Peter Yancofskie,-----	Lithuanian,-----	Miner,-----	30	M.	Hammond,-----	Schuylkill,-----	Hand and leg crushed by fall of coal.
5	Joseph Verboskre,-----	Russian,-----	Miner,-----	24	S.	Packer No. 5,-----	Schuylkill,-----	Hands and face burned by explosion of gas.
6	Frank Koniek,-----	Slavonian,-----	Miner,-----	45	M.	Centralla,-----	Columbia,-----	Wrist fractured by falling off a mule.
11	Joe Douse,-----	American,-----	Driver,-----	20	S.	Centralla,-----	Columbia,-----	Leg cut and ankle dislocated by fall of coal.
11	John Sowakis,-----	Russian,-----	Laborer,-----	19	S.	Packer No. 5,-----	Schuylkill,-----	

Month	Name	Age	Nationality	Occupation	Days	Location	Details	Location	Details
May	James Moran	20	American	Slatepicker	16	Potts	Columbia	Arm fractured by falling down breaker steps. Outside.	
	Pearce Eisenhower	23	American	Miner	27	Hammond	Schuylkill	Face and hands burned by explosion of gas.	
	Oliver Eisenhower	23	American	Miner	26	Hammond	Schuylkill	Face and hands burned by explosion of gas.	
	William Brennan	25	American	Switchman	17	Hammond	Schuylkill	Knee dislocated. Bumped between ear and motor.	
	Charles Dougherty	18	American	Repairman	23	East	Schuylkill	Chest bruised and ankle sprained by cars.	
June	John Codrington	24	American	Miner	20	Centralia	Columbia	Thumb cut by machinery. Outside.	
	Joe Fronsieck	29	Polish	Miner	27	Centralia	Columbia	Shoulder fractured by fall of rock.	
	John Monaghan	28	Irish	Miner	35	Hammond	Schuylkill	Leg fractured by lump of coal rolling on him.	
July	Patrick Carroll	27	American	Starter	40	Potts	Columbia	Leg crushed by rush of coal at a battery.	
	Edward Reeves	3	Irish	Bottomman	26	Hammond	Schuylkill	Hips crushed by cars.	
	William Ray	4	American	Slatepicker	19	Potts	Columbia	Wrist fractured by cars. Outside.	
	John Umloff	6	American	Laborer	25	Potts	Columbia	Face burned by explosion of gas.	
	Anthony Branzas	8	Polish	Laborer	22	Potts	Columbia	Face and hands burned by explosion of gas.	
Sept.	John Moran	2	Irish	Laborer	54	Centralia	Columbia	Ribs fractured by falling against a car.	
	William Bambridge	3	English	Miner	52	Hammond	Schuylkill	Hands and face burned by explosion of gas.	
	Thomas Weller	9	American	Miner	48	Centralia	Columbia	Head lacerated by falling in the sump.	
Oct.	Edward Rothermerel	9	American	Carpenter	20	Hammond	Columbia	Leg fractured by falling off a scaffold. Outside.	
	John Conroy	23	Irish	Miner	54	Centralia	Columbia	Ribs fractured by fall of coal.	
	Anthony O'Donnell	29	Irish	Laborer	52	Hammond	Schuylkill	Wrist fractured by cars. Outside.	
	John E. Davis	6	American	Miner	26	Potts	Columbia	Hands and face burned by explosion of gas.	
	Elias Lavelle	6	American	Miner	27	Potts	Columbia	Hands and face burned by explosion of gas.	
	William Pursell	13	American	Shaker-tender	27	Centralia	Columbia	Compound fracture of the arm by machinery. Outside.	
	Michael Moran	26	American	Loader boss	30	Hammond	Schuylkill	Hips bruised by falling under motor.	
	William Marcavage	26	Lithuanian	Miner	44	Hammond	Schuylkill	Face and hands burned by explosion of gas.	
	Charles Zalaek	26	Lithuanian	Miner	30	S.	Columbia	Face and hands burned by explosion of gas.	
	Michael Ginty	9	American	Loader	32	Potts	Columbia	Collar bone fractured by falling off a car. Outside.	
Nov.	Samuel Clemens	14	Italian	Laborer	22	Midvalley	Columbia	Hip dislocated by fall of coal.	
	Thomas Day	23	American	Jig-tender	17	Hammond	Schuylkill	Neck lacerated by machinery. Outside.	
	Michael Klink	19	Lithuanian	Miner	42	Hammond	Schuylkill	Leg fractured by fall of rock.	
Dec.	Walley Fritzoek	2	Italian	Laborer	25	Centralia	Columbia	Shoulder dislocated. Bumped between cars. Outside.	
	Fred Fetteralt	9	American	Timberman	22	Potts	Columbia	Arm fractured by collar falling on him.	
	Frank Bolena	10	Polish	Laborer	40	Girard Mammoth	Schuylkill	Arm fractured by fall of coal.	
	John Wilcoxon	12	American	Miner	43	East	Schuylkill	Ribs fractured by fall of coal.	
	John Stivets	12	American	Starter	23	Potts	Columbia	Collar bone fractured by rush of coal at a battery.	
14	Walter Morris	16	Lithuanian	Miner	35	Hammond	Schuylkill	Ribs fractured by fall of coal.	
	Dennis Cavanagh	16	Irish	Laborer	38	Midvalley	Columbia	Foot cut off at the instep by fall of slate.	

CONDITION OF COLLIERIES

PHILADELPHIA AND READING COAL AND IRON COMPANY

Hammond Colliery.—Ventilation fair; drainage and condition as to safety good.

Bast Colliery.—Ventilation, drainage and condition as to safety, good.

Potts Colliery.—Ventilation, drainage and condition as to safety good.

Bear Ridge Colliery.—Ventilation, drainage and condition as to safety, good.

LEHIGH VALLEY COAL COMPANY

Centralia Colliery.—Ventilation, drainage and condition as to safety, good.

Packer No. 5 Colliery.—Ventilation, drainage and condition as to safety, good.

MIDVALLEY COAL COMPANY

Midvalley Colliery.—Ventilation good; drainage fair; condition as to safety, good.

GIRARD MAMMOTH COAL COMPANY

Girard Mammoth Colliery.—Ventilation fair; drainage and condition as to safety, good.

W. R. McTURK COAL COMPANY

Girard-Bear Ridge Colliery.—Ventilation fair; drainage and condition as to safety, good.

DRESHMAN COAL COMPANY

Pioneer Colliery.—Ventilation, drainage and condition as to safety, good.

MINE FOREMEN'S EXAMINATIONS

The annual examination of applicants for certificates of qualification as Mine Foremen and Assistant Mine Foremen was held in Union Hall, Pottsville, June 19 and 20. The Board of Examiners was composed of the following members: James A. O'Donnell, Inspector, Centralia; T. E. Snyder, Superintendent, Wilburton; M. J. Dixon, Miner, Locust Dale; A. J. Haley, Miner, Ashland.

The following persons passed a satisfactory examination and were granted certificates as follows:

Mine Foremen

Joseph S. Dewey, Mahanoy Plane; Frank H. Richter, Wilburton; David Whitaker, James Corrigan, Samuel Palmer, Arthur G. Smith, Centralia; Sylvester J. Beaver, Aristes; William J. Smith, Girardville.

Assistant Mine Foremen

Edward J. Barrett, Patrick J. Kennedy, Girardville; Daniel F. Gallagher, Wilburton.



Fifteenth District

NORTHUMBERLAND COUNTY

Mt. Carmel, Pa., February 23, 1909.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor of transmitting herewith my annual report as Inspector of Mines of the Fifteenth Anthracite District for the year ending December 31, 1908.

Respectfully submitted,

BENJAMIN I. EVANS, Inspector.

SUMMARY OF STATISTICS

Number of collieries,	11
Number of mines,	30
Number of mines in operation,	30
Number of tons of coal shipped to market,	2,697,818
Number of tons used at mines for steam and heat,	322,427
Number of tons sold to local trade and used by employes,	39,986
Number of tons produced,	3,060,231
Number of tons produced by compressed air machines, ...	—
Number of tons produced by electrical machines,	—
Number of persons employed inside of mines,	5,875
Number of persons employed outside,	2,730
Number of fatal accidents inside of mines,	26
Number of fatal accidents outside,	2
Number of non-fatal accidents inside of mines,	20
Number of non-fatal accidents outside,	6
Number of tons of coal produced per fatal accident inside,	117,701
Number of persons employed per fatal accident inside, ..	226
Number of persons employed per fatal accident outside, ..	1,365
Number of persons employed per non-fatal accident inside, ..	294
Number of persons employed per non-fatal accident outside, ..	455
Number of wives made widows,	14
Number of children orphaned,	34
Number of steam locomotives used outside,	19
Number of compressed air locomotives used inside,	3
Number of electric motors used inside,	7
Number of fans in use,	31
Number of gaseous mines in operation,	14
Number of non-gaseous mines in operation,	16

TABLE A

PRODUCTION OF COAL

Names of Operators	Tons
Philadelphia and Reading Coal and Iron Company,	1,120,773
Susquehanna Coal Company,	960,984
Lehigh Valley Coal Company,	347,241
Greenough Red Ash Coal Company,	208,361
Enterprise Coal Company,	200,916
Colonial Collieries Company,	114,503
Excelsior Coal Company,	107,453
Total,	<u>3,060,231</u>

Production by Counties

Northumberland,	<u>3,060,231</u>
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TABLE B.—Fatal and non-fatal accidents inside and outside of mines; number of tons of coal produced per accident; number of persons employed; number employed per accident

Names of Operators	Fatal Accidents			Non-fatal Accidents			Tons of coal produced per fatal accident inside	Tons of coal produced per non-fatal accident inside	Number of employees inside	Number of employees outside	Total number of employees	Number of employees inside per fatal accident	Number of employees outside per fatal accident	Number of employees inside per non-fatal accident	Number of employees outside per non-fatal accident
	Fatal Accidents		Non-fatal Accidents		Total	Total									
	Inside	Outside	Inside	Outside											
Philadelphia and Reading Coal and Iron Co.,	12	1	6	4	6	93,398	186,796	2,276	984	3,290	3,290	100	379	214	209
Susquehanna Coal Co.,	12	1	9	4	13	86,082	103,776	1,028	838	2,766	2,766	161	838	214	209
Lehigh Valley Coal Co.,	1	1	3	1	4	347,241	113,147	530	218	7,757	7,757	530	180	180	218
Enterprise Coal Co.,	1	1	1	1	2	208,361	503,361	388	927	615	615	309	227	369	369
Greenough Red Ash Coal Co.,	1	1	1	1	2	114,363	114,363	200	181	550	550	309	200	200	194
Colonial Collieries Co.,	1	1	1	1	2	114,363	114,363	175	88	263	263	88	175	200	194
Miscellaneous companies,	1	1	1	1	2	114,363	114,363	175	88	263	263	88	175	200	194
Totals and averages for district.	26	2	20	6	26	117,701	153,011	5,875	2,730	8,605	8,605	226	1,365	294	455

TABLE C.—Classification of Fatal Accidents Inside and Outside of Mines

	Months												Percentages	
	January	February	March	April	May	June	July	August	September	October	November	December		Totals
Causes of Accidents Inside														
Falls of coal, -----			1	1	1					2	2		5	19.23
Falls of slate, -----						1	1					1	5	19.23
Mine cars, -----	1		1									1	3	11.54
Explosions of gas and dust, -----	3												3	11.53
Explosions of powder and dynamite, -----		1											1	3.85
Premature blasts, -----	3							1	1	1			6	23.08
Miscellaneous, -----		1									2		3	11.54
Totals, -----	7	2	2	1	1	1	1	3	3	2	3	26	100.00	
Causes of Accidents Outside														
Cars, -----				1									1	50.00
Machinery, -----								1					1	50.00
Totals, -----				1				1				2	100.00	
Grand totals inside and outside, -----	7	2	2	2	1	1	1	4	3	2	3	28		

TABLE D.—Classification of Non-fatal Accidents Inside and Outside of Mines

	Months												Percentages	
	January	February	March	April	May	June	July	August	September	October	November	December		Totals
Causes of Accidents Inside														
Falls of coal, -----		1											1	5.00
Falls of slate, -----	1				1	1	1		1				5	25.00
Falls of roof, -----			1					1					2	10.00
Mine cars, -----		1						1		1			3	15.00
Explosions of powder and dynamite, -----					1	1							1	5.00
Premature blasts, -----	1			1	1	1			1				5	25.00
Miscellaneous, -----	1		1					1					3	15.00
Totals, -----	3	2	2	1	3	2	1	3	2	1			20	100.00
Causes of Accidents Outside														
Cars, -----			2										2	33.33
Machinery, -----				1									1	16.67
Miscellaneous, -----					1			2					3	50.00
Totals, -----			2	1	1			2					6	100.00
Grand totals inside and outside, -----	3	2	4	2	4	2	1	2	3	2	1		26	

TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
Inside													
Miners, -----	2	1	1	1	1	1	1	---	3	2	1	2	16
Miners' laborers, -----	5	1	---	---	---	---	---	---	---	1	---	---	7
Drivers and runners, -----	---	---	---	---	---	---	---	---	---	---	1	---	1
Company men, -----	---	---	1	---	---	---	---	---	---	---	---	1	1
All other employes, -----	---	---	---	---	---	---	---	---	---	---	---	---	1
Totals, -----	7	2	2	1	1	1	1	---	3	3	2	3	26
Outside													
All other employes, -----	---	---	---	1	---	---	---	---	1	---	---	---	2
Totals, -----	---	---	---	1	---	---	---	---	1	---	---	---	2
Grand totals inside and outside,--	7	2	2	2	1	1	1	---	4	3	2	3	28

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
Inside													
Miners, -----	1	1	1	1	3	2	---	---	1	1	---	---	11
Miners' laborers, -----	2	1	1	---	---	---	1	---	1	1	---	---	7
Drivers and runners, -----	---	---	---	---	---	---	---	---	1	---	---	---	1
Doorboys and helpers, -----	---	---	---	---	---	---	---	---	---	1	---	---	1
Totals, -----	3	2	2	1	3	2	1	---	3	2	1	---	20
Outside													
Engineers and firemen, -----	---	---	1	1	---	---	---	1	---	---	---	---	3
Slatepickers (boys), -----	---	---	---	---	---	---	---	1	---	---	---	---	1
All other employes, -----	---	---	1	---	1	---	---	---	---	---	---	---	2
Totals, -----	---	---	2	1	1	---	---	2	---	---	---	---	6
Grand totals inside and outside,--	3	2	4	2	4	2	1	2	3	2	1	---	26

TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
American, -----		1	1						2				4
Welsh, -----										1			1
German, -----												1	1
Polish, -----	3		1		1		1		1	2	1	2	12
Hungarian, -----	3												3
Italian, -----	1												1
Slavonian, -----				1									1
Lithuanian, -----		1							1				2
Russian, -----				1		1							2
Tyrolean, -----											1		1
Totals, -----	7	2	2	2	1	1	1		4	3	2	3	28

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
American, -----	1	1	2	2	2	1			1		1		11
English, -----						1							1
German, -----			1		1								2
Polish, -----	1	1	1				1	1		2			6
Hungarian, -----					1			1	1				3
Austrian, -----	1								1				1
Russian, -----													1
Totals, -----	3	2	4	2	4	2	1	2	3	2	1		26

Richards Colliery:														
Richards N. D.,	Slope, ---	Gaseous,	Fan, ---	20	7	6	84	1.8	Vulcan, ---	Steam, ---	6	94,000	92,000	94,364
Richards S. D.,	Slope, ---	Gaseous,	Fan, ---	20	6	7	86	1.6	Mullen, ---	---	7	40,100	40,000	42,100
Richards No. 4,	Slope, ---	Non-gas.,	Fan, ---	16	4.5	4.5	94	1.4	Mullen, ---	---	5	53,085	48,345	54,000
Richards No. 5,	Slope, ---	Non-gas.,	Fan, ---	12	4.5	4.5	80	.8	Sturdevant,	---	2	19,000	47,500	18,450
Scott Colliery:	Shaft, ---	Gaseous,	Fan, ---	18	5	5	92	1.7	Mullen, ---	Steam, ---	4	138,397	128,000	131,740
Lehigh Valley Coal Co.														
Sayre Colliery:														
Sayre, No. 1,	Shaft, ---	Gaseous,	Fan, ---	20	6	10	60	1	---	Steam, ---	6	51,584	49,760	50,000
Stoux No. 3,	Slope, ---	Gaseous,	Fan, ---	16	6	5	75	1.3	Guibal, ---	---	4	42,000	40,760	43,000
	Slope, ---	Gaseous,	Fan, ---	16	5	5	90	1.7	---	---	10	75,000	72,000	76,000
Greenough Red Ash Coal Co.														
Greenough Colliery:														
Greenough No. 1,	Shaft, ---	Non-gas.,	Fan, ---	15	5	4	120	2.4	---	Steam, ---	5	44,100	41,700	44,600
Greenough No. 2,	Shaft, ---	Non-gas.,	Fan, ---	12	4	4	80	.7	Mullen, ---	---	4	21,000	20,300	20,650
Greenough No. 3,	Slope, ---	Non-gas.,	Fan, ---	12	4	4	52	.7	---	---	1	15,200	14,000	14,659
Enterprise Coal Co.														
Enterprise Colliery:														
Enterprise No. 3,	Slope, ---	Non-gas.,	Fan, ---	14	3.5	5	90	1.5	---	Steam, ---	4	38,750	36,500	38,480
Enterprise No. 10,	Slope, ---	Non-gas.,	Fan, ---	14	3.5	5	120	1.7	---	---	4	49,400	48,000	50,000
Enterprise Shaft,	Shaft, ---	Non-gas.,	Fan, ---	14	4.5	5	90	1.1	Guibal, ---	---	3	45,750	43,670	46,480
Colonial Collieries Co.														
Natalie Colliery:														
Natalie No. 1,	Slope, ---	Non-gas.,	Fan, ---	15	4	4.6	48	1.3	Vulcan, ---	Steam, ---	2	31,940	31,670	32,100
Natalie No. 2,	Slope, ---	Non-gas.,	Fan, ---	18	4	4.5	39	.9	Mullen, ---	---	3	33,924	37,100	37,840
Natalie No. 3,	Slope, ---	Non-gas.,	Fan, ---	15	4	5	45	1.7	Vulcan, ---	---	3	23,640	27,500	28,000
Excelsior Coal Co.														
Excelsior,	Drift, ---	Non-gas.,	Fan, ---	14	3.8	5	65	1.3	Beadle, ---	Steam, ---	3	32,500	30,740	31,150

TABLE I.—Operators, location of collieries, railroads, etc.

Names of Operators and Collieries	County	Name of General Superintendent	Post Office	Name of Superintendent	Post Office	Railroad to Mine
Philadelphia and Reading Coal and Iron Co.						
Alaska, -----						
Reliance, -----						
Loeust Spring, -----	Northumberland,	W. J. Richards, --	Pottsville, -----	Reese Tasker, -----	Pottsville, -----	P. and R.
Loeust Gap, -----						
Susquehanna Coal Co.						
Pennsylvania, -----						
Richards, -----	Northumberland,	R. A. Quin, -----	Wilkes-Barre, -----	W. R. Reinhardt, --	Shamokin, -----	Pennsylvania
Scott, -----						
Lehigh Valley Coal Co.						
Sayre, -----	Northumberland,	S. D. Warriner, --	Wilkes-Barre, -----	J. M. Humbrey, --	Centralia, -----	Lehigh Valley
Greenough Red Ash Coal Co.						
Greenough, -----	Northumberland,	Edward Brennan, --	Shamokin, -----	Jesse Roads, -----	Shamokin, -----	Pennsylvania
Enterprise Coal Co.						
Enterprise, -----	Northumberland,	W. L. Connell, ---	Seranton, -----	Alfred Hale, -----	Enterprise, -----	P. and R.
Colonial Collieries Co.						
Natale, -----	Northumberland,	J. B. Neale, -----	Philadelphia, -----	John Conway, ----	Minersville, -----	P. and R.
Excelsior Coal Co.						
Excelsior, -----	Northumberland,	A. Robertson, ----	Pottsville, -----	A. D. Robertson, --	Shamokin, -----	P. and R.

TABLE 2 — Continued

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Number of kegs of powder used	Number of pounds of dynamite used	Number of horses and mules
Colonial Collieries Co.	Northumberland, ---	99,928	12,900	1,675	114,503	184	394	---	2	1,815	1,	39
Excelsior Coal Co.	Northumberland, ---	98,417	8,670	366	107,453	196	263	---	---	2,300	4,	37
Grand totals, -----	-----	2,437,818	322,437	39,985	3,060,231	-----	8,605	28	26	58,175	802,	768

TABLE 2.—Part 2

Names of Operators	County	Number of Boilers				Locomotives			Number of steam engines of all classes	Total horse power	Number of pumps delivering water to surface	Capacity in gallons per minute	Quantity delivered to surface per minute—gallons	Number of electric dynamos	Number of air compressors
		Cylindrical	Horse power	Tubular	Horse power	Total horse power	Steam	Air								Electric
Philadelphia and Reading Coal and Iron Co.,	Northumberland,	12	360	2	150	510	6	3	73	12,286	16	20,695	13,280	8	
Susquehanna Coal Co.,				48	6,500	6,500	7		55	7,100	16	11,400	2,919	4	
Lehigh Valley Coal Co.,				11	2,900	2,900	3	3	40	2,675	8	10,360	7,650	1	1
Greenough Red Ash Coal Co.,				8	1,300	1,300			12	600	3	1,000	1,000	1	
Enterprise Coal Co.,				10	2,500	2,500		4	12	1,278	3	3,274	3,274	2	
Cotontal Collieries Co.,				11	1,700	1,700	2		10	1,500	3	1,400	1,400		
Excelsior Coal Co.,				12	360	360	1		7	241	1	600	400		
Totals,			12	360	142	22,490	22,850	19	3	200	25,680	48	48,729	29,923	4	15

Table 3.—Number of each class of employees inside and outside of mines

Names of Operators and Collieries	County	Inside										Outside								Grand total inside and outside			
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Doorboys and helpers	Pumpmen	Company men	All other employees	Total inside	Superintendents	Foremen	Blacksmiths and carpenters	Engineers and firemen	State pickers (boys)	State pickers (men)	Bookkeepers and clerks		All other employees	Total outside	
Philadelphia and Reading Coal and Iron Co.	Northumberland,	1	7	---	372	75	59	17	5	53	111	700	---	2	10	24	60	12	5	119	232	932	
Alaska, -----		2	6	---	243	56	28	6	4	58	99	501	---	2	8	18	46	9	5	95	183	684	
Reliance, -----		2	10	---	226	60	33	14	3	88	150	586	---	4	20	51	65	34	7	388	569	1,155	
Locust Spring, -----		1	7	---	263	34	30	2	3	43	106	439	---	---	---	---	---	---	---	---	---	---	489
Locust Gap, -----		5	30	---	1,104	225	150	39	15	242	460	2,276	---	8	38	93	171	55	17	602	984	3,260	
Totals, -----																							
Susquehanna Coal Co.	Northumberland,	2	4	11	319	157	56	8	12	159	25	753	1	1	24	38	62	27	5	170	328	1,081	
Pennsylvania, -----		2	3	11	344	104	52	16	12	135	88	767	---	1	24	45	102	24	5	165	366	1,133	
Richards, -----		1	---	4	195	99	15	2	4	62	26	408	---	1	12	19	45	5	4	58	144	552	
Scott, -----		5	7	26	858	360	123	26	28	356	139	1,928	1	3	60	102	209	56	14	383	838	2,766	
Totals, -----																							
Lehigh Valley Coal Co.	Northumberland,	2	8	---	230	93	28	8	10	---	160	539	1	3	21	31	9	3	2	148	218	757	
Greenough Red Ash Coal Co.	Northumberland,	1	6	---	151	54	40	2	4	30	81	369	2	1	8	17	84	1	3	65	181	550	
Enterprise Coal Co.	Northumberland,	2	1	---	224	46	29	4	8	49	25	388	1	2	12	35	49	12	2	114	227	615	

Colonial Collieries Co. Natalie, -----	1	2	70	78	30	2	2	5	10	200	---	1	10	18	84	12	2	117	194	394
Excelsior Coal Co. Excelsior, -----	1	2	53	79	14	1	2	14	4	175	1	1	8	13	15	11	2	37	88	263
Grand totals, -----	17	56	26	2,695	935	414	82	696	885	5,875	6	19	157	309	571	150	42	1,476	2,730	8,605

TABLE 3.—Part 2

Names of Operators and Collieries	County	Number of Days Worked in Breaker												Total	
		January	February	March	April	May	June	July	August	September	October	November	December		
Philadelphia and Reading Coal and Iron Co.	Northumberland,	21	15	20	22	24	16	12	14	19	21	21	21	25	230
Alaska,		21	17	4	---	4	16	13	13	19	21	23	24	24	175
Reliance,		22	16	14	23	24	16	13	14	18	21	23	24	24	228
Locust Spring, Locust Gap,		---	---	---	---	---	---	---	---	---	---	---	---	---	---
Susquehanna Coal Co.	Northumberland,	24	19	19	23	24	25	11	15	21	22	22	23	23	248
Pennsylvania,		24	21	19	23	24	24	10	15	22	21	23	23	23	249
Richards,		18	17	16	18	17	20	8	11	17	17	17	17	17	133
Scott,		---	---	---	---	---	---	---	---	---	---	---	---	---	---
Lehigh Valley Coal Co.	Northumberland,	22	15	22	22	23	26	13	13	18	19	19	22	234	
Greenough, Greenough Red Ash Coal Co.	Northumberland,	24	22	20	22	23	24	13	18	22	22	23	23	256	
Enterprise, Enterprise Coal Co.	Northumberland,	21	18	12	21	23	17	7	13	17	20	22	12	203	
Natalis, Colonial Collieries Co.	Northumberland,	---	---	---	20	21	25	21	22	19	20	17	19	184	
Excelsior, Excelsior Coal Co.	Northumberland,	16	17	12	18	17	13	13	14	18	18	20	20	196	

TABLE 4.—Fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Mine	County	Nature and Cause of Accident in Brief
-Jan.	9 Mike Tobis, -----	Hungarian, Hungarian, Hungarian,	Miner, Laborer, Laborer,	46 M. -----	M. 1	5	5	} Scott, -----	S. (Northumberland,	Killed by explosion of gas. They were driving a counter gangway and were working on the night shift. A breast in the main gangway below ran away, causing an outburst of gas. The return airway could not take all the gas away as quickly as it was given off by the breast. Part of it made its way up to the counter gangway and came upon the naked light of one of the men, causing an explosion and setting off working with locked safety lamps, but one of them had opened his lamp. Fatally injured. Caught between car and chute. Died January 12.
	9 Joe Carmofski, -----			28 M. -----	M. 1					
	9 William Redwin, -----			26 S. -----	S. -----					
-Jan.	9 John Soroski, -----	Polish, -----	Laborer, -----	38 M. -----	M. 1	-----	-----	Locust Spring,	S. (Northumberland,	Killed by blast while pushing a cartridge of powder into a hole with a drill. The cartridge was too large for the hole and while he was pounding it back with a drill it exploded.
	9 Felix Sando, -----	Italian, -----	Laborer, -----	27 S. -----	S. -----	-----	-----	Alaska, -----		
-Feb.	22 Edward Miller, -----	Polish, -----	Miner, -----	33 M. -----	M. 1	4	-----	} Reliance, -----	S. (Northumberland,	Killed while tamping a hole that was charged with dynamite. They were pounding it with the butt end of a drill when it exploded.
	22 Victor Cosofski, -----	Polish, -----	Laborer, -----	22 S. -----	S. -----					
Feb. 25	David Wolfgang, -----	American, -----	Miner, -----	42 S. -----	S. -----	-----	-----	Locust Gap, -----	-----	Killed by explosion of powder. While he was making a cartridge of powder with a naked light on his head a spark from the light fell into the keg of powder, causing an explosion.

TABLE 4 —Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Mine	County	Nature and Cause of Accident in Brief
Feb. 25	Louis Chronis, -----	Lithuanian, -----	Laborer, -----	18	S.	-----	-----	Pennsylvania, --		Killed by rush of coal. He was trying to start a battery when the coal slid away from under his feet, taking him down the chute and the breast coal rushed down on him. He was riding on the front of an empty trip that was being pushed off a motor, when the front car jumped off the track, catching him between it and the rib.
Mar. 3	Anthony Barleski, -----	Polish, -----	Motor conductor.	20	S.	-----	-----	Sayre, -----		Fatally injured. He was riding on the front of an empty trip that was being pushed off a motor, when the front car jumped off the track, catching him between it and the rib.
5	John Shivley, -----	American, -----	Miner, -----	55	M.	1	2	Scott, -----		Instantly killed by fall of coal while dressing off a shot.
April 4	Charles Elko, -----	Slavonian, -----	Miner, -----	40	M.	1	-----	Alaska, -----		Killed by fall of coal while barring down a piece of slate.
9	John Fethko, -----	Russian, -----	Dumppman, --	31	M.	1	-----	Richards, -----	Northumberland, --	Killed. While riding on the front of a locomotive he was thrown off in going over a joint and the locomotive passed over him. Outside.
May 12	William Snipko, -----	Polish, -----	Miner, -----	24	M.	1	2	Scott, -----		Killed by fall of coal while drilling a hole at face of breast.
June 4	Mike Chupeck, -----	Russian, -----	Miner, -----	40	M.	1	6	Greenough, -----		Killed by fall of slate while barring down loos coal off the rib.
July 22	Anthony Drought, -----	Polish, -----	Miner, -----	35	S.	-----	-----	Locust Gap, --		Killed by fall of slate. He had neglected to timber his working place.
Sept. 11	John Artman, -----	American, -----	Miner, -----	35	S.	-----	-----	Locust Spring, --		Killed by fall of slate. His partner had advised him not to work under the slate until it had been timbered.
17	Gilbert Snyder, -----	American, -----	Picker, -----	17	S.	-----	-----	Enterprise, -----		Killed. He was whirled around a cog shaft in the breaker. He had some inside the protecting fence to look for something. Outside.

Sept. 17	William Comski, -----	Lithuanian,	Miner, -----	32	S.	1	1	Locust Gap, --	<p>Killed by fall of slate. He had neglected to timber his working place. Killed by blast. He had shortened the squib and could not reach a place of safety before the shot went off. Killed by fall of coal in heading. They had neglected to timber the heading. Killed by blast. He had shortened the squib and could not reach a place of safety before the shot went off. Killed by blast. He had lighted two shots and one of them failed to explode but as he was returning to the face of the gangway it went off, killing him. Killed. While trying to jump on the front end of an empty trip from the high side of the gangway he struck a chute and was caught between it and the car. Killed by rush of coal. They were cutting out a prop in the breast manway to lower the coal at the face of the breast by running it down the manway. When the prop was almost cut through it broke and the coal from the breast rushed in on them. They should have drawn the coal out through the battery below. Killed in heading by fall of coal while making room for an air battery.</p>
24	Anthony Androcaivitch	Polish, ----	Miner, -----	32	M.	1	1	Pennsylvania, -	
Oct. 7	Mike Duda, -----	Polish, ----	Miner, -----	38	M.	1	1	Richards, -----	
7	John Truskoski, -----	Polish, ----	Laborer, -----	22	S.	1	1	Locust Spring,	
15	Thomas Davies, -----	Welsh, ----	Miner, -----	62	S.	1	1		
Nov. 7	Julius Tamamini, -----	Tyrolean, -	Miner, -----	28	M.	1	2	Alaska, -----	
11	William Snatko, -----	Polish, ----	Driver, -----	20	S.	1	1	Pennsylvania, -	
Dec. 23	Stany Bartiseavitch, -----	Polish, ----	Miner, -----	37	M.	1	5	Richards, -----	
23	Frank Loganski, -----	Polish, ----	Miner, -----	26	S.	1	1		
24	Jacob Fritz Eberle, -----	German, ----	Repairman, -	49	M.	1	2	Locust Gap, --	

Northumberland,

TABLE 5.—Non-fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Mine	County	Nature and Cause of Accident in Brief
Jan. 10	Jake Supinski, -----	Polish, ----	Laborer, -----	55	S.	Pennsylvania, ----		Leg broken. While he was tamping a hole a piece of slate fell on his leg. While he was tamping a hole that was charged with dynamite with the butt end of a drill the dynamite exploded, injuring him about the head and blowing out his eye. As he stepped backward his heel caught in a piece of sheet iron and he fell backward on a rock, dislocating his back. Leg broken. While attempting to jump on cars that were in motion he fell under them.
18	Felix Regorti, -----	Austrian, --	Miner, -----	23	S.	Reliance, -----		
25	William H. Kramer, -----	American, --	Laborer, -----	20	S.	Sayre, -----		Leg broken. Struck by a piece of coal that fell out from the face when he was dressing off a shot.
Feb. 19	Wally Begosh, -----	Polish, ----	Laborer, -----	18	S.	Natalie, -----		Leg broken. Fell under a car that was in motion. Outside.
19	William Lee, -----	American, --	Miner, -----	46	M.	Sayre, -----		Skull fractured. While he was cleaning a slope he fell and his head came in contact with a piece of sheet iron.
Mar. 2	William Roeshoe, -----	German, ---	Driver, -----	18	S.	Sayre, -----		Leg broken. While pushing a dumper out to the bank it jumped the track and crushed the cab of the engine, catching his leg. Outside.
17	Mike Wasgo, -----	Polish, ----	Laborer, -----	49	M.	Pennsylvania, ----		Leg broken. Struck by a piece of rock that fell from the face while he was working at the face of a tunnel. Eyesight destroyed. While trying to light two shots the one went off before he had lighted the other and shot him in the face.
18	John Shafer, -----	American, --	Locomotive engineer.	23	S.	Richards, -----		
18	John Doyle, -----	American, --	Miner, -----	34	M.	Locust Spring, ----		
April 10	John Erehony, -----	American, --	Miner, -----	34	M.	Locust Gap, -----		

April 24	Andrew Hower,	American,	Engineer,	39	M.	Pennsylvania,	Arm broken. While he was oiling the fan engine his coat caught in the shaft, which whirled him around, breaking his arm in three places. Outside. Hand blown off. He had put a squib and a cap into a piece of dynamite and was carrying it up a manway when he lifted his arm above his head and unconsciously ignited the squib, which caused the dynamite to explode, blowing off his hand.
May 9	Theodore Mathias,	American,	Miner,	23	M.	Sayre,	Leg broken. Struck by a piece of coal from a shot.
13	Mike Moreno,	Polish,	Miner,	30	M.	Scott,	Leg broken. Struck by a piece of slate.
18	Anthony Smink,	German,	Miner,	46	M.	Richards,	Jaw fractured. Kicked by a mule while hitching him. Outside.
26	Henry Drumheller,	American,	Teamster,	27	S.	Pennsylvania,	Eyesight destroyed. He was pushing a cartridge of powder into a hole with an iron drill, when it exploded.
June 5	Hiram Beecher,	English,	Miner,	64	M.	Reliance,	Leg broken by fall of slate.
26	John Decker,	American,	Miner,	56	S.	Locust Gap,	Leg and arm broken. Struck by a piece of slate at face of gangway. His miner should have secured the place.
28	Wally Wasloski,	Polish,	Laborer,	38	M.	Richards,	Sight of one eye destroyed. A glass gauge burst in the boiler house and a piece of the glass struck him in the eye. Outside.
Aug. 1	James Slumko,	Hungarian,	Fireman,	42	M.	Scott,	Leg broken. Fell from a beam in the breaker. Outside.
7	Mike Swinko,	Polish,	Slatepicker,	15	S.	Natalie,	Back broken. He walked into the cage pit at bottom of shaft and the cage came down on top of him.
Sept. 4	Alex Druskil,	Russian,	Miner,	29	M.	Greenough,	Hand cut off. While he was trying to pick up a lamp that had fallen from his hand a car passed over his hand.
17	George Wessner,	American,	Driver,	20	S.	Richards,	Leg taken off by fall of rock in tunnel.
24	Andrew Hydrock,	Hungarian,	Laborer,	32	M.	Pennsylvania,	Leg broken. Struck by piece of slate at face of gangway.
5	Steve Kashtis,	Polish,	Laborer,	20	S.	Richards,	Burned by explosion of powder. He had shortened the squib and when lighting it he ignited the powder, which exploded, burning his face.
6	William Pisancko,	Polish,	Miner,	52	M.	Scott,	Leg broken. While he was running alongside of the cars he fell and the cars ran over his leg.
Nov. 23	John McGinn,	American,	Doorboy,	17	S.	Locust Spring,	

Northumberland.

CONDITION OF COLLIERIES

PHILADELPHIA AND READING COAL AND IRON COMPANY

Alaska.—Ventilation, drainage and road beds in good condition.

Reliance.—Ventilation, drainage and road beds in good condition.

Locust Spring Shaft.—Ventilation, drainage and road beds in good condition.

Locust Gap East.—Ventilation, drainage and road beds in good condition.

Locust Gap West.—Ventilation, drainage and roads in good condition.

Locust Spring West.—Ventilation, drainage and road beds in good condition.

SUSQUEHANNA COAL COMPANY

Pennsylvania.—Ventilation, drainage and road beds in good condition.

Richards.—Ventilation, drainage and road beds in fair condition.

Scott.—Ventilation and drainage good; road beds kept in fair condition.

LEHIGH VALLEY COAL COMPANY

Sayre.—Ventilation fair; drainage good; road beds in fair condition.

Sioux No. 1.—Ventilation fair; drainage poor; road beds in fair condition.

Sioux No. 3.—Ventilation fair; drainage good; road beds in poor condition.

GREENOUGH RED ASH COAL COMPANY

Greenough.—Ventilation, drainage and road beds in good condition.

ENTERPRISE COAL COMPANY

Enterprise.—Ventilation fair; drainage poor; roads in fair condition.

COLONIAL COLLIERIES COMPANY

Natalie No. 1.—Ventilation, drainage and road beds in fair condition.

Natalie No. 2.—Ventilation, drainage and roads in fair condition.

EXCELSIOR COAL COMPANY

Excelsior Drift.—Ventilation fair; drainage and road beds in good condition.

MINE FOREMEN'S EXAMINATIONS



The examination of applicants for certificates of qualification as Mine Foremen and Assistant Mine Foremen was held at Pottsville in July.

The following persons passed a successful examination and were granted certificates:

Mine Foremen

Patrick Quigley, Mount Carmel.

Assistant Mine Foremen

Thomas J. Downey, Patrick McGill, Thomas Brokenshire, Stephen Toy, John P. Wise, Ralph Tarsus, Jacob Spinley, Jacob Hinkle, Mount Carmel; William Trovinger, Kulpmont; Thomas Brennan, Shamokin; Edward Manning.



Sixteenth District

NORTHUMBERLAND COUNTY

Shamokin, Pa., February 26, 1909.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor of transmitting herewith my annual report as Inspector of Mines of the Sixteenth Anthracite District for the year ending December 31, 1908.

Respectfully submitted,

M. McLAUGHLIN, Inspector,

SUMMARY OF STATISTICS

Number of collieries,	12
Number of mines,	38
Number of mines in operation,	38
Number of tons of coal shipped to market,	2,008,908
Number of tons used at mines for steam and heat,	281,702
Number of tons sold to local trade and used by employes,	66,785
Number of tons produced,	2,357,395
Number of tons produced by compressed air machines, ...	—
Number of tons produced by electrical machines,	—
Number of persons employed inside of mines,	4,764
Number of persons employed outside,	2,212
Number of fatal accidents inside of mines,	23
Number of fatal accidents outside,	2
Number of non-fatal accidents inside of mines,	33
Number of non-fatal accidents outside,	5
Number of tons of coal produced per fatal accident inside, ..	102,495
Number of persons employed per fatal accident inside, ..	207
Number of persons employed per fatal accident outside, ..	1,106
Number of persons employed per non-fatal accident inside, ..	144
Number of persons employed per non-fatal accident outside, ..	442
Number of wives made widows,	17
Number of children orphaned,	53
Number of steam locomotives used outside,	20
Number of electric motors used inside,	3
Number of fans in use,	38
Number of gaseous mines in operation,	18
Number of non-gaseous mines in operation,	20
Number of new mines opened,	2
Number of old mines abandoned,	2

TABLE A

PRODUCTION OF COAL

Names of Operators	Tons
Philadelphia and Reading Coal and Iron Company,	1,234,638
Mineral Railroad and Mining Company,	530,030
Susquehanna Coal Company,	327,881
Excelsior Coal Company,	130,736
Shipman Coal Company,	90,466
Buck Ridge Coal Company,	43,364
Trevorton Coal Land Company,	280
Total,	<u>2,357,395</u>

Production by Counties

Northumberland,	<u>2,357,395</u>
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TABLE C.—Classification of Fatal Accidents Inside and Outside of Mines

	Months												Totals	Percentages	
	January	February	March	April	May	June	July	August	September	October	November	December			
Causes of Accidents Inside															
Falls of coal,	1				1	1		2		2				7	30.44
Falls of slate,		1		1		1								3	13.04
Falls of roof,				1		1			1			1		3	13.04
Mine cars,					1				1		1			3	13.04
Suffocation by gas, etc.,										1				1	4.35
Explosions of powder and dynamite,								1						1	4.35
Premature blasts,												1		1	4.35
Falling into slopes, etc.,		1							1		1			3	13.04
Crushed at batteries,								1						1	4.35
Totals,	1	2		2	2	2		4	3	2	3	2	23	100.00	
Causes of Accidents Outside															
Machinery,											1			1	50.00
Miscellaneous,						1								1	50.00
Totals,						1					1		2	100.00	
Grand totals inside and outside, ..	1	2		2	2	3		4	3	2	4	2	25		

TABLE D.—Classification of Non-fatal Accidents Inside and Outside of Mines

	Months												Totals	Percentages	
	January	February	March	April	May	June	July	August	September	October	November	December			
Causes of Accidents Inside															
Falls of coal,				1	2						1			4	12.12
Falls of slate,	2		1		1	1	1	2						9	27.28
Falls of roof,									1					1	3.03
Mine cars,	1	2	1			1						1		6	18.18
Explosions of gas and dust,								1				1		2	6.06
Explosions of powder and dynamite,	1	1			1	2		1			1			7	21.21
Premature blasts,								1						1	3.03
Falling into slopes, etc.,											1			1	3.03
Miscellaneous,							1	1						2	6.06
Totals,	4	3	2	1	4	4	2	6		1	4	2	33	100.00	
Causes of Accidents Outside															
Cars,				1		1								2	40.00
Machinery,		1												1	20.00
Miscellaneous,		2												2	40.00
Totals,		3		1		1							5	100.00	
Grand totals inside and outside, ..	4	6	2	2	4	5	2	6		1	4	2	38		

TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
Inside													
Miners, -----		1		2	1	2		2	2	2	2	1	15
Miners' laborers, -----	1							2					4
Drivers and runners, -----					1				1		1		3
Company men, -----		1										1	2
Totals, -----	1	2		2	2	2		4	3	2	3	2	23
Outside													
Slatepickers (boys), -----						1					1		1
All other employes, -----													1
Totals, -----						1					1		2
Grand totals inside and outside, -----	1	2		2	2	3		4	3	2	4	2	25

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
Inside													
Miners, -----	2	2	1	1	4	2	1	4		1	4		22
Miners' laborers, -----						1		2				1	4
Drivers and runners, -----	1		1			1							3
Company men, -----	1	1					1					1	4
Totals, -----	4	3	2	1	4	4	2	6		1	4	2	33
Outside													
Slatepickers (boys), -----		2											2
All other employes, -----		1		1		1							3
Totals, -----		3		1		1							5
Grand totals inside and outside, -----	4	6	2	2	4	5	2	6		1	4	2	38

TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												Totals	
	January	February	March	April	May	June	July	August	September	October	November	December		
American, -----		1						3	1					5
English, -----				1								1	1	3
Welsh, -----								1						1
German, -----					1							1		2
Polish, -----				1	1	2			2	1	1			8
Slavonian, -----						1								1
Russian, -----	1	1								1	1	1		5
Totals, -----	1	2		2	2	3		4	3	2	4	2		25

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

	Months												Totals	
	January	February	March	April	May	June	July	August	September	October	November	December		
American, -----	1	2	2	1	1	1	1	3						12
Welsh, -----											1			1
Irish, -----	1													1
German, -----		1					1							2
Polish, -----	2	1		1	2	3					2			11
Hungarian, -----						1	1							1
Italian, -----					1									1
Lithuanian, -----								2			1			3
Austrian, -----								1		1		1		3
Russian, -----		2										1		3
Totals, -----	4	6	2	2	4	5	2	6		1	4	2		38

TABLE I.—Operators and mines, kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents, and number of persons employed inside

Names of Operators and Mines	Kind of opening	Gasous or non-gasous	Method of ventilation	Diameter of fan in feet	Width of blades in feet	Depth of blades in feet	Number of revolutions per minute	Water gauge developed—in inches	Name of fan	Power used	Area of furnace bars in square feet	Number of splits of air currents	Number of cubic feet of air per minute entering the mine at inlet	Total quantity of air per minute circulating in all the splits in cubic feet	Number of cubic feet per minute passing out at outlet	Number of persons employed inside
Philadelphia and Reading Coal and Iron Co.																
North Franklin Colliery:																
North Franklin No. 1,	Drift, ---	Non-gas.,	Fan, ---	18 6	6	6	60	7	{Guibal, ---	{Electricity, ---	---	5	44,000	31,000	---	400
North Franklin No. 2,	Slope, ---	Gasous, ---	Fan, ---	18 5	5	5	85	1.6	{Guibal, ---	{Steam, ---	---	6	53,000	40,000	---	400
North Franklin No. 3,	Slope, ---	Non-gas.,	Fan, ---	15 5	3.6	3.6	60	1	{Electricity, ---	{Electricity, ---	---	3	27,500	16,000	---	400
Bear Valley Colliery:																
Bear Valley No. 1,	Drift, ---	Non-gas.,	Fan, ---	15 3.11	5	5	95	6	{Guibal, ---	{Steam, ---	---	5	48,000	35,000	---	400
Bear Valley No. 2,	Shaft, ---	Gasous, ---	Fan, ---	18 5.9	4.9	4.9	120	2.2	{Guibal, ---	{Steam, ---	---	1	52,000	40,000	---	400
Bear Valley No. 3,	Shaft, ---	Gasous, ---	Fan, ---	12 4	3.6	3.6	40	.5	{Guibal, ---	{Steam, ---	---	7	16,000	12,000	---	400
Burnside Colliery:																
Burnside No. 1,	Shaft, ---	Gasous, ---	Fan, ---	15 4	5	5	90	1.1	{Guibal, ---	{Steam, ---	---	8	43,500	30,500	---	300
Burnside No. 2,	Shaft, ---	Gasous, ---	Fan, ---	15 4	5	5	90	1.1	{Guibal, ---	{Steam, ---	---	3	43,920	32,000	---	300
Burnside No. 3,	Drift, ---	Non-gas.,	Fan, ---	15 4.2	5.6	5.6	36	1	{Guibal, ---	{Steam, ---	---	4	18,000	15,000	---	300
Stirling Colliery:																
Stirling No. 1,	Slope, ---	Gasous, ---	Fan, ---	18 6	5.4	5.4	85	1.3	{Guibal, ---	{Steam, ---	---	5	43,000	29,400	---	300
Stirling No. 2,	Slope, ---	Gasous, ---	Fan, ---	21 7.2	6	6	65	1.4	{Guibal, ---	{Steam, ---	---	4	49,500	36,000	---	300
Stirling No. 3,	Slope, ---	Gasous, ---	Fan, ---	15 4.6	4.3	4.3	80	1.3	{Guibal, ---	{Steam, ---	---	3	37,000	27,000	---	300
Henry Clay Colliery:																
Henry Clay No. 1,	Shaft, ---	Gasous, ---	Fan, ---	21 7	6.3	6.3	68	1.4	{Guibal, ---	{Steam, ---	---	3	24,680	21,000	---	230
Henry Clay No. 2,	Shaft, ---	Gasous, ---	Fan, ---	15 4	5	5	120	1.2	{Guibal, ---	{Steam, ---	---	6	58,000	40,000	---	230

TABLE I.—Continued

Names of Operators and Mines	Kind of opening	Gaseous or non-gaseous	Method of ventilation	Diameter of fan in feet	Width of blades in feet	Depth of blades in feet	Number of revolutions per minute	Water gauge developed—in inches	Name of fan	Power used	Area of furnace bars in square feet	Number of splits of air currents	Number of cubic feet of air per minute entering the mine at inlet	Total quantity of air per minute circulating in all the splits in cubic feet	Number of cubic feet per minute passing out at outlet	Number of persons employed inside
Buck Ridge Coal Co.	Slope, -----	Gaseous,	Fan, -----	14	4.6	4.6	90	1	Pollock,	Steam, -----	-----	5	43,000	31,000	} 200	}
Buck Ridge Colliery:	Slope, -----	Gaseous,	Fan, -----	12	3.6	3.6	90	.75	Guibal, --	Steam, -----	-----	5	41,000	30,000		
Buck Ridge No. 1, -----																
Buck Ridge No. 2, -----																
Trevorton Coal Land Co.																
Katherine Colliery, 1, *	Drift, -----	Non-gas.,	Natural, -----													
Katherine No. 1, -----	Drift, -----															
Katherine No. 2, -----	Drift, -----															
Katherine No. 3, -----	Drift, -----															

*Not yet in operation.

TABLE 1.—Operators, location of collieries, railroads, etc.

Names of Operators and Collieries	County	Name of General Superintendent	Post Office	Name of Superintendent	Post Office	Railroad to Mine
Philadelphia and Reading Coal and Iron Co. Bear Valley, ----- Big Mountain, ----- Burnside, ----- Henry Clay, ----- North Franklin, ----- Stirling, -----	Northumberland,	W. J. Richards, --	Pottsville, -----	Reese Tasker, ---	Pottsville, -----	P. and R.
Mineral Railroad and Mining Cameron, (Co.) ----- Luke Frier, -----	Northumberland,	Robert A. Quin, --	Wilkes-Barre, -----	E. A. Rhoads, --	Shamokin, -----	Pennsylvania
Susquehanna Coal Co. Hickory Ridge, ----- Hickory Swamp Washery, -----	Northumberland,	Robert A. Quin, --	Wilkes-Barre, -----	W. R. Rinehardt,	Shamokin, -----	Pennsylvania
Excelsior Coal Co. Corbin, -----	Northumberland,	Andrew Robertson,	Shamokin, -----	George W. Robertson,	Shamokin, -----	P. and R.
Shipman Coal Co. Colbert, -----	Northumberland,	J. M. Stauffer, --	Hazleton, -----	Joseph J. Evans,	Shamokin, -----	Pennsylvania
Buck Ridge Coal Co. Buck Ridge No. 2, -----	Northumberland,	-----	-----	D. H. McGee, ---	Shamokin, -----	P. and R.
Trevorton Coal Land Co. Katherine, -----	Northumberland,	-----	-----	E. R. Shurtleff, --	Trevorton, -----	P. and R.
Llewellyn Mining Co. Royal Oak,* -----	Northumberland,	-----	-----	-----	-----	-----

* Abandoned April 11, 1908.

TABLE 2.—Number of tons of coal mined, number of days worked, number of persons employed, number killed and injured, quantity of powder and dynamite used, etc.

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Number of kegs of powder used	Number of pounds of dynamite used	Number of horses and mules
Philadelphia and Reading Coal and Iron Co.												
North Franklin, -----	Northumberland,	{ 242,097	22,915	5,977	271,819	216	692	2	9	6,283	46,755	55
Bear Valley, -----	Northumberland,	{ 200,396	18,717	435	220,148	224	637	2	5	6,895	23,400	74
Burnside, -----	Northumberland,	{ 330,651	53,493	5,663	389,807	229	729	1	1	7,441	28,891	127
String, -----	Northumberland,	{ 289,647	46,919	16,298	352,864	243	318	1	1	2,350	8,413	101
Henry Clay, -----							316	1	1	4,015	14,981	
Big Mountain, -----							335	1	2	2,672	18,499	
Totals, -----		{ 1,094,221	142,044	28,373	1,234,638	-----	3,227	3	18	29,396	140,939	357
Mineral Railroad and Mining Co.												
Cameron, -----	Northumberland,	{ 509,482	38,083	21,213	328,781	242	1,188	7	6	7,490	28,960	130
Luke Fidler, -----	Northumberland,	{ 154,359	32,294	14,596	201,249	243	615	1	1	4,072	15,081	74
Totals, -----		{ 423,841	70,380	35,809	530,030	-----	1,803	8	7	11,562	44,041	204
Susquehanna Coal Co.												
Hickory Ridge, -----	Northumberland,	{ 256,382	32,020	1,014	289,416	241	876	4	5	6,685	30,885	88
Hickory Swamp Washery, -----	Northumberland,	{ 33,610	4,820	35	38,465	116	28	3	2	-----	-----	1
Totals, -----		{ 289,992	36,840	1,049	327,881	-----	904	7	7	6,685	30,885	89
Excelsior Coal Co.												
Corbin, -----	Northumberland,	{ 115,436	15,300	-----	130,736	224	410	1	1	5,275	8,700	27

Colbert, -----	Northumberland,	74,404	14,708	1,354	90,466	229	317	1	3	2,262	6,000	28
Buck Ridge No. 2, -----	Northumberland,	41,014	2,175	175	43,364	107	235	2		910	7,500	16
Katherine, -----	Northumberland,		255	25	280	73	80			25	750	11
Grand totals, -----		2,008,908	281,702	66,785	2,357,395	-----	6,976	25	38	56,115	238,815	727

TABLE 2.—Part 2

Names of Operators	County	Number of Boilers				Locomotives			Number of steam engines of all classes	Total horse power	Number of pumps delivering water to surface	Capacity in gallons per minute	Quantity delivered to surface per minute—gallons	Number of electric dynamos	Number of air compressors	
		Cylindrical	Horse power	Tubular	Horse power	Total horse power	Steam	Alr								Electric
Philadelphia and Reading Coal and Iron Co.,	Northumberland,	2	80	62	8,050	8,060	5	3	88	12,255	32	29,240	16,938	3	5	
Mineral Railroad and Mining Co.,		16	512	32	4,100	4,180	6	---	41	7,273	4	7,295	4,478	1	5	
Susquehanna Coal Co.,		---	---	22	2,750	2,750	6	---	16	1,900	10	4,750	1,846	---	2	
Excelsior Coal Co.,		---	---	2	150	662	2	---	8	240	2	468	310	---	---	
Shipman Coal Co.,		---	---	9	1,050	1,050	1	---	17	695	2	1,160	580	---	1	
Buck Ridge Coal Co.,		---	---	4	600	600	1	---	13	410	2	1,380	400	---	---	
Trevorton Coal Land Co.,		---	---	1	300	300	---	---	1	25	---	---	---	---	---	
Totals,		---	18	592	132	17,010	17,602	20	3	184	22,708	52	44,293	24,552	4	14

Table 3.—Number of each class of employes inside and outside of mines

Names of Operators and Collieries	County	Inside										Outside							Grand total inside and outside				
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Doorboys and helpers	Pumpmen	Company men	All other employes	Total Inside	Superintendents	Foremen	Backsmiths and carpenters	Englners and firemen	State pickers (Boys)	State pickers (men)		Bookkeepers and clerks	All other employes	Total outside	
Philadelphia and Reading Coal and Iron Co.	Northumberland,	1	5		205	92	24	8	2	56	89	477		1	9	20	19	17	4	145	215	692	
North Franklin,		2	4		162	93	20	5	2	49	83	420				10	18	10	3	119	217	637	
Bear Valley,		3	6		233	78	37	6	1	60	63	465		2	9	27	52	13	8	188	244	750	
Burnside,		1	4		119	50	16	5	3	41	52	291			4	3				18	97	318	
Stirling,		1	4		107	47	21	9		40	62	291		1	10	21	43	7	3	140	225	516	
Henry Clay,		1	4		116	56	15	1	4	38	55	290		1		11				32	45	335	
Big Mountain,		2	3																				
Totals,		8	25		942	416	133	29	12	284	404	2,254		7	42	100	160	56	16	592	973	3,227	
Mineral Railroad and Mining Co.		Northumberland,	1	5	13	394	125	54	7	22	228	866		1	1	20	33	95	12	6	154	322	1,188
Cameron,			1	2	9	143	104	35	2	1	11	95	403		1	5	30	75	8	5	87	212	615
Luke Fidler,																							
Totals,	2	7	22	537	229	89	19	8	33	323	1,269		2	25	63	170	20	11	241	534	1,803		
Susquehanna Coal Co.	Northumberland,	2	4	6	229	133	33	6	8	94	23	588		2	32	57	113	3	7	124	338	876	
Hickory Ridge,																2				24	28	28	
Hickory Swamp Washery,																							
Totals,	2	4	6	229	133	33	6	8	94	23	588		2	32	59	115	3	7	148	336	904		

TABLE 3—Continued

Names of Operators and Collieries	County	Inside										Outside								Grand total inside and outside	
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Doorboys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Foremen	Blacksmiths and carpenters	Engineers and firemen	State pickers (boys)	State pickers (men)	Bookkeepers and clerks		All other employes	Total outside
Excelsior Coal Co. Corbin, -----	Northumberland,	1	3	2	188	60	23	1	61	10	349	1	1	4	16	10	14	----	15	61	410
Shipman Coal Co. Celbert, -----	Northumberland,	1	1	2	55	33	8	3	55	-----	159	1	1	12	10	29	6	2	97	158	317
Buck Ridge Coal Co. Buck Ridge No. 2, -----	Northumberland,	1	-----	2	100	18	9	2	40	-----	174	1	1	3	7	7	1	1	40	61	235
Trevorton Coal Land Co. Katherine, -----	Northumberland,	1	-----	1	7	7	1	-----	-----	4	21	1	-----	6	3	-----	-----	1	48	59	80
Grand totals, -----	-----	16	41	35	2,058	806	296	57	567	764	4,764	6	14	124	258	491	100	38	1,181	2,212	6,976

TABLE 4.—Fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Mine	County	Nature and Cause of Accident in Brief
Jan. 28	Simon Petricco, ---	Russian, ---	Laborer, ---	38	M. 1	---	---	Hickory Ridge, ---	---	Killed by fall of coal while robbing pillars.
Feb. 5	Michael Swartz, ---	Russian, ---	Coal-pusher, ---	23	S. ---	---	---	Cameron, ---	---	Killed by falling into chute.
Feb. 25	Henry Derrick, ---	American, ---	Miner, ---	49	M. 1	3	---	Burnside, ---	---	Killed by fall of slate at face of gangway while preparing to stand a set of timbers.
April 22	John Williams, ---	English, ---	Miner, ---	51	M. 1	3	---	Stirling, ---	---	Killed by fall of slate at face of breast.
April 27	Benjamin W i t h- Kofskie.	Polish, ---	Miner, ---	19	S. ---	---	---	Bear Valley, ---	---	Killed by fall of rock near right rib of breast while shoveling coal.
May 17	Michael Sonoskie, ---	German, ---	Miner, ---	52	M. 1	---	---	Cameron, ---	---	Fatally injured. Caught between top rock and mine car at bottom of slope. Instantly killed by fall of coal while robbing gangway.
May 19	Paul Gristo, ---	Polish, ---	Laborer, ---	50	M. 1	3	---	North Franklin, ---	---	Fatally injured by a rush of culm from the bank which caught him against the car. Died June 11. Outside.
June 4	John Veritskie, ---	Polish, ---	Laborer, ---	45	M. 1	3	---	Hickory Swamp, ---	Northumberland,	Fatally injured. Body bruised by fall of coal at face of breast. Died same day.
9	Clem Tarser, ---	Slavonian, ---	Miner, ---	45	M. 1	3	---	Hickory Ridge, ---	---	Killed by fall of slate at face of breast.
Aug. 13	Jacob Vosuskie, ---	Polish, ---	Miner, ---	40	S. ---	---	---	Hickory Ridge, ---	---	Fatally burned by powder. Died August 10 in the State Hospital.
Aug. 3	Moses Tomlinson, ---	American, ---	Miner, ---	22	S. ---	---	---	North Franklin, ---	---	Killed by fall of coal at face of gangway.
11	Harry Smith, ---	American, ---	Laborer, ---	30	S. ---	---	---	Hickory Swamp, ---	---	Fatally injured by fall of coal at face of gangway. Died August 18.
11	Edward Kashner, ---	American, ---	Laborer, ---	24	S. ---	---	---	Hickory Swamp, ---	---	Instantly killed by rush of coal which caught him at the battery.
31	William J. Jones, ---	Welsh, ---	Miner, ---	38	M. 1	5	---	Corblin, ---	---	Instantly killed by fall of rock at face of breast.
Sept. 16	Jacob Evanovage, ---	Polish, ---	Miner, ---	56	M. 1	1	---	Cameron, ---	---	

Sept. 24	Thomas Postusic, -	Polish, ----	Miner, ----	37	M. 1	6	Henry Clay, ----	Fatally injured. In attempting to get back from some loose coal, he slipped and fell down the chute. He was operated on at the Jefferson Hospital, Philadelphia, for some internal trouble that was caused by the fall. He died December 12.
25	William Schoch, ---	American, ---	Driver, ----	20	S. ----		Cameron, ----	Fatally injured. Squeezed between a mine car and the face of backswitch tunnel.
Oct. 7	George Sorovich, --	Russian, ---	Miner, ----	40	M. 1	5	Big Mountain, ---	Fatally injured by fall of coal at working face. Died same day.
31	Leo Kopyreskie, ----	Polish, ----	Miner, ----	45	M. 1	4	Colbert, ----	Fatally injured. Leg fractured and body injured internally by fall of coal at working face. He died the same day at State Hospital.
Nov. 2	William Weber, ----	German, ---	Statepicker, -	14	S. ----		Bear Valley, ----	Fatally injured. The chute conveying coal to the rolls became blocked. He tried to start it with his foot, instead of using the scraper, and was drawn into the rolls. Outside.
2	William Nairns, ----	English, ----	Driver, ----	38	M. 1	3	Cameron, ----	Fatally injured. Leg bruised between mine cars while taking off the spreader. Died in State Hospital, November 5.
10	Thomas Pomacher, -	Polish, ----	Miner, ----	43	M. 1	2	Cameron, ----	Fatally injured. Body bruised by falling down manway. Died in State Hospital, December 12.
12	Thomas Gaboiskie, -	Russian, ---	Miner, ----	44	M. 1	5	Cameron, ----	Found dead at face of breast. The verdict of the Coroner's Jury was that he came to his death by suffocation from white damp produced by a shot that blocked the upcast manway, thereby shutting off the air.
Dec. 28	Thomas Hague, ---	English, ----	Miner, ----	38	M. 1	4	Luke Fidler, ----	Fatally injured. A hole had missed fire and he was drilling it out when it exploded, lacerating his face and hands. He died in State Hospital, January 2, 1909.
30	John Canos, ----	Russian, ---	Loader, ----	30	M. 1	3	Hickory Ridge, --	Instantly killed. He was loading a car when a large piece of top rock fell in the breast, displacing the props and batteries and killing him on the platform.

Northumberland,

TABLE 5.—Non-fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Mine	County	Nature and Cause of Accident in Brief
Jan. 6	Thomas Pincoskie, --	Polish, ---	Miner, ---	35	M.	Bear Valley, ---		Foot fractured by fall of slate from between iron bolts below face of breast.
15	John Barrett, -----	Irish,-----	Starter, -----	28	M.	Hickory Ridge, ---		Left hand blown off by explosion of dynamite which was caused by an iron bar dropping on it.
15	Edward Helme, J. F.,---	American,---	Miner, ---	22	S.	North Franklin, ---		Right leg fractured by fall of slate at face of breast.
16	Joseph Sockalowski, -	Polish, ---	Driver, -----	19	S.	Luke Fidler, ---		Leg fractured while trying to uncouple cars that were in motion on the turn-out.
Feb. 8	Joel Otto, -----	German, ---	Teamster, ---	50	M.	Burnside, ---		Ribs fractured. While he was taking the rough lock chain off the wheel the team started and the wheel passed over his right side and shoulder. Outside.
10	William Sweinhart, ---	American,---	Bottomman, ---	21	M.	North Franklin, ---	Northumberland, -	Left leg fractured and back bruised. He was coupling cars on the bottom turn-out when a trip of cars ran away from the topmen, breaking the safety appliance, and ran down the slope, catching him between the cars on the turn-out.
11	John Rateo, -----	Russian, ---	Miner, ---	38	M.	Hickory Ridge, ---		Right leg fractured. While he was passing between empty cars on the bottom of the slope a driver who was taking a trip of loaded cars from the east side bumped the empty cars, catching him between them.
12	Harrison Jenkins, ---	American,---	Slatepicker, ---	16	S.	North Franklin, ---		Arm fractured. He was running down the stens on the outside of the breaker and fell on his arm. Outside.

Month	Day	Name	Nationality	Occupation	Age	Sex	Location	Incident Description
Feb.	15	Joseph Grego	Polish	Slatepicker	17	S.	Colbert	Collar bone and leg fractured, also scalp wounded. He was employed to attend a scraper line. He was late getting to work in the morning and went to the scraper line while the machinery was in motion, without notifying those in charge, and was caught in transmission rope and thrown across the scraper line. Outside.
	27	Charles Sutronavage	Russian	Miner	40	M.	Cameron	Hand blown off and eyes blown out by an explosion of dynamite. He was thawing the dynamite with a naked lamp.
Mar.	4	John Hanrahan	American	Driver	21	S.	Hickory Swamp	Leg fractured while uncoupling car in motion.
	5	Howard Klinget	American	Miner	33	S.	Buck Ridge No. 2	Leg fractured by fall of slate at face of breast.
April	11	Daniel Tharp	American	Spragget	18	S.	North Franklin	Abdomen squeezed while coupling cars while in motion. Outside.
	16	F. Pogoginski	Polish	Miner	39	M.	Buck Ridge No. 2	Leg fractured by fall of coal at face of breast.
May	9	Robert Dematis	Italian	Miner	25	S.	Bear Valley	Head and face lacerated by fall of slate at face of gangway.
	14	Andrew Kuchinski	Polish	Miner	43	M.	Cameron	Breast bruised by fall of coal at face of breast.
	19	Lar. Schruden	Polish	Miner	45	M.	North Franklin	Hip fractured by fall of coal while robbing gangway.
	26	Daniel Smeltz	American	Miner	48	M.	Bear Valley	Side and arm burned by powder. Burned by explosion of powder. They took some powder out of a keg in the heading and lighted it to see if it was good, and in doing so ignited the powder in the keg.
June	13	Mart Rushinski	Polish	Miner	27	S.	Cameron	Leg fractured by fall of slate at face of breast.
	13	John Lesavage	Polish	Miner	40	S.		Northumberland	Arm fractured. Caught between car and chute.
	15	John Sandtskie	Polish	Laborer	34	S.	Stirling	Collar bone broken and body bruised. Run over by mine car. Outside.
	23	Henry Ney	American	Driver	16	S.	North Franklin	Hand crushed. He was riding on a trip of loaded cars when his hand was caught between the chute and a piece of slate that was on top of the car.
	29	John Mader	Hungarian	Laborer	50	M.	Hickory Ridge	Arm fractured by fall of slate in breast. Burned by powder.
July	14	Adam Barslet	German	Loader	30	M.	North Franklin	Big toe smashed. Burned by explosion of gas. Head and hands lacerated by flying coal from blast while returning to relight it.
Aug.	31	George Snyder	American	Miner	48	M.	Bear Valley	
	3	John Rogers, Sr.	American	Miner	58	S.	North Franklin	
	24	John Washeskie	Lithuanian	Miner	41	M.	Colbert	
	25	Joseph Wisgo	Lithuanian	Laborer	25	M.	Colbert	
	25	Israel Jones	American	Miner	30	M.	Hickory Swamp	

TABLE 5 — Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Mine	County	Nature and Cause of Accident in Brief
Aug. 25	Metro Peek, -----	Austrian, --	Laborer, --	20	S.	Hickory Ridge, - - - -		Skull fractured by fall of slate at working face while robbing pillars.
26	Lewis Schreffler, -----	American, --	Miner, -----	24	M.	North Franklin, - - - -		Ankle fractured and head lacerated by fall of slate at face of breast.
Oct. 7	John Langdon, -----	Austrian, --	Miner, -----	32	S.	Hickory Ridge, -----		Leg fractured below the knee by fall of rock at working face while robbing pillars.
Nov. 7	Martin Shavinski, --	Polish, ----	Miner, -----	54	M.	Big Mountain, -----		Hand blown off by charge of dynamite.
9	Stanl Molesbelskie, ---	Polish, ----	Miner, -----	26	S.	Corbin, -----		Jaw fractured by fall of slate at face of breast.
10	Anthony Fultzskte, ---	Lithuanian,	Miner, -----	50	M.	Cameron, -----	Northumberland, --	Body bruised. He went into an old breast to take the plank of the manway and while at work he fell down the breast.
10	Evan Jeremiab, -----	Welsh, ----	Miner, -----	48	M.	Deer Valley, -----		Arm fractured by fall of coal at face of breast.
Dec. 5	John Steimbach, -----	Austrian, --	Loader, -----	39	M.	Cameron, -----		Hips squeezed. Attempted to jump on cars while they were in motion.
23	John Smallets, -----	Russian, ---	Laborer, -----	26	S.	Big Mountain, -----		Hands and face burned by gas.

CONDITION OF COLLIERIES

PHILADELPHIA AND READING COAL AND IRON COMPANY

North Franklin Colliery.—Ventilation fair; drainage good. Condition as to safety good.

Bear Valley Colliery.—Ventilation and drainage good. Condition as to safety good.

Burnside Colliery.—Ventilation fair; drainage good. Condition as to safety good.

Stirling Colliery.—Ventilation fair; drainage good. Condition as to safety good.

Henry Clay Colliery.—Ventilation and drainage good. Condition as to safety good.

Big Mountain Colliery.—Ventilation and drainage good. Condition as to safety good.

MINERAL RAILROAD AND MINING COMPANY

Cameron Colliery.—Ventilation and drainage fair. Condition as to safety good.

Luke Fidler Colliery.—Ventilation good; drainage fair. Condition as to safety good.

SUSQUEHANNA COAL COMPANY

Hickory Ridge Colliery.—Ventilation good; drainage fair. Condition as to safety good.

Hickory Swamp Colliery.—Ventilation and drainage fair. Condition as to safety good.

BUCK RIDGE COAL COMPANY

Buck Ridge No. 2 Colliery.—Ventilation and drainage good. Condition as to safety good.

SHIPMAN COAL COMPANY

Colbert Colliery.—Ventilation and drainage fair. Condition as to safety good.

EXCELSIOR COAL COMPANY

Corbin Colliery.—Ventilation and drainage good. Condition as to safety good.

TREVORTON COAL LAND COMPANY

Katherine Colliery.—Ventilation fair; drainage good. Condition as to safety good.

IMPROVEMENTS

PHILADELPHIA AND READING COAL AND IRON COMPANY

North Franklin Colliery.—A tunnel was driven south from the No. 8 vein to the No. 7 vein, East Slope workings, a distance of 50 2-3 yards.

A standard supply store house, 103 x 32 feet, has been erected at this colliery.

Bear Valley Colliery.—A tunnel was driven north from the No. 10 vein to the No. 11 vein, No. 1 shaft level, a distance of 75 yards. A tunnel was driven north from the No. 10 vein to the No. 10½ vein, No. 1 shaft level, a distance of 33 2-3 yards.

Burnside Colliery.—A standard supply store house, 103 x 32 feet, has been erected at this colliery.

Henry Clay Colliery.—A tunnel was driven south from the No. 10 vein to the No. 10½ vein, in the first lift shaft level, a distance of 61 yards.

Big Mountain Colliery.—A tunnel was driven from the east No. 8 vein south to the No. 9 vein, in the No. 2 slope workings, a distance of 49 yards.

MINERAL RAILROAD AND MINING COMPANY

Cameron Colliery.—A tunnel was driven in the Rock slope from No. 8 vein south to No. 9 vein, a distance of 17 2-3 yards.

Luke Fidler Colliery.—A slope was sunk in No. 2 vein, No. 11 gangway, a distance of 125 yards, and a pair of Exeter double engines, 12 x 16 inches, were erected inside to hoist from this slope by compressed air.

SHIPMAN KOAL COMPANY

Colbert Colliery.—A new boiler house 40 x 69 feet has been erected, in which are installed two return tubular boilers of 350 H. P., one 1,500 H. P. feed water heater and a standard feed pump.

Four sets of conveyor lines, having a total length of 830 feet, have been erected to convey the material from the culm banks to the breaker for preparation. These conveyor lines are driven by four single conveyor engines of 35 H. P. each.

A 20 x 12 x 14 inch Knowles Piston packed pump has been installed to wash the culm banks to the conveyor lines.

The breaker has been equipped with modern machinery for cleaning and preparing the coal.

MINE FOREMEN'S EXAMINATIONS

The annual examination of applicants for certificates of qualification as Mine Foremen and Assistant Mine Foremen was held in the Court House, Pottsville, June 19 and 20.

The Board of Examiners was composed of the following members: Martin McLaughlin, Inspector, Shamokin; E. A. Rhoads, Superintendent, Shamokin; Patrick Ryan, Miner, Shamokin, and James O'Rourke, Miner, Trevorton.

The following persons having passed a satisfactory examination were granted certificates.

Mine Foremen

James Lynch, Edwin Jones, Michael Reiland and Michael Daily, Shamokin; William McFadden, Mount Carmel.

Assistant Mine Foremen

Thomas Dillon, Shamokin; Hugh Dolan, Kulpmont; William Batnan, Trevorton.



Seventeenth District

CARBON AND SCHUYLKILL COUNTIES

Lansford, Pa., February 23, 1909.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor of transmitting herewith my annual report as Inspector of Mines for the Seventeenth Anthracite District, for the year ending December 31, 1908.

Respectfully submitted,

ISAAC M. DAVIES, Inspector.

SUMMARY OF STATISTICS

Number of collieries,	17
Number of mines,	37
Number of mines in operation,	37
Number of tons of coal shipped to market,	3,325,413
Number of tons used at mines for steam and heat,	393,197
Number of tons sold to local trade and used by employes,	110,558
Number of tons produced,	3,829,168
Number of tons produced by compressed air machines, ..	—
Number of tons produced by electrical machines,	—
Number of persons employed inside of mines,	5,079
Number of persons employed outside,	2,833
Number of fatal accidents inside of mines,	14
Number of fatal accidents outside,	6
Number of non-fatal accidents inside of mines,	35
Number of non-fatal accidents outside,	7
Number of tons of coal produced per fatal accident inside, ..	273,512
Number of persons employed per fatal accident inside, ..	362
Number of persons employed per fatal accident outside, ..	472
Number of persons employed per non-fatal accident inside, ..	145
Number of persons employed per non-fatal accident outside, ..	404
Number of wives made widows,	10
Number of children orphaned,	22
Number of steam locomotives used inside of mines,	14
Number of steam locomotives used outside,	14
Number of compressed air locomotives used inside,	1
Number of compressed air locomotives used outside,	19
Number of electric motors used inside,	21
Number of electric motors used outside,	2
Number of fans in use,	17
Number of gaseous mines in operation,	16
Number of non-gaseous mines in operation,	21
Number of new mines opened,	1
Number of old mines abandoned,	1

TABLE A

PRODUCTION OF COAL

Names of Operators	Tons
Lehigh Coal and Navigation Company,	3,033,412
Estate A. S. Van Wickle,	318,638
Coxe Brothers and Company, Incorporated,	264,844
Beddall Brothers and Company,	123,001
Evans Colliery Company,	44,765
Lehigh Valley Coal Company,	27,267
Hacklebernie Coal Company,	9,210
Moses Neyer,	5,387
Frank Adams,	2,614
Total,	<u>3,829,168</u>

Production by Counties

Carbon,	2,361,525
Schuylkill,	1,467,643
Total,	<u>3,829,168</u>

TABLE B.—Fatal and non-fatal accidents inside and outside of mines; number of tons of coal produced per accident; number of persons employed; number employed per accident

Names of Operators	Fatal Accidents			Non-fatal Accidents			Tons of coal produced per fatal accident inside	Tons of coal produced per non-fatal accident inside	Number of employees inside	Number of employees outside	Total number of employees	Number of employees inside per fatal accident	Number of employees outside per fatal accident	Number of employees inside per non-fatal accident	Number of employees outside per non-fatal accident
	Inside	Outside	Total	Inside	Outside	Total									
Lehigh Coal and Navigation Co., ----	12	4	16	27	4	31	232,785	4,207	2,185	6,461	356	546	158	546	546
Estate A. S. Van Winkle, ----	1	1	2	5	1	6	318,638	468	300	768	468	300	92	300	300
Coxe Brothers and Co., Incorporated, ----	1	1	2	2	1	3	132,422	275	168	443	275	168	137	168	168
Beddall Brothers and Co., ----					1	1	261,814	30	107	137	137				
Moses Neyer, ----				1		1	5,387	9	5	14	14			9	107
Miscellaneous companies, ----								26	68	94					
Totals and averages for district,	14	6	20	35	7	42	273,512	5,079	2,833	7,912	362	472	145	472	404

TABLE C.—Classification of Fatal Accidents Inside and Outside of Mines

	Months												Percentages	
	January	February	March	April	May	June	July	August	September	October	November	December		Totals
Causes of Accidents Inside														
Falls of coal, -----								1				1	2	14.29
Falls of slate, -----				1									1	7.14
Mine cars, -----						2	1						3	21.43
Explosions of gas and dust, -----									1				1	7.14
Suffocation by gas, etc., -----								1					1	7.14
Premature blasts, -----								2	1				3	21.43
Mules, -----							1						1	7.14
Miscellaneous, -----			2										2	14.29
Totals, -----			2	1		2	2	4	2			1	14	100.00
Causes of Accidents Outside														
Cars, -----	1			1						1			3	50.00
Machinery, -----				1		1					1		3	50.00
Totals, -----	1			2		1				1	1		6	100.00
Grand totals inside and outside, -----	1		2	3		3	2	4	2	1	1	1	20	

TABLE D.—Classification of Non-fatal Accidents Inside and Outside of Mines

	Months												Percentages	
	January	February	March	April	May	June	July	August	September	October	November	December		Totals
Causes of Accidents Inside														
Falls of coal, -----	1		1							1			3	8.57
Falls of slate, -----											2		2	5.71
Falls of roof, -----						1							1	2.86
Mine cars, -----		2				1		2					5	14.29
Explosions of gas and dust, -----		2		2		3		1			2		10	28.57
Explosions of powder and dynamite, -----					1				1				2	5.71
Premature blasts, -----	1				2								5	14.29
Crushed at batteries, -----					1				1	1			1	2.86
Machinery, -----							1						1	2.86
Miscellaneous, -----	1		1		1		2						5	14.28
Totals, -----	3	4	2	2	5	5	3	3	2	2	4		35	100.00
Causes of Accidents Outside														
Cars, -----	1		2			1							4	57.15
Miscellaneous, -----			1		1					1			3	42.85
Totals, -----	1		3		1	1				1			7	100.00
Grand totals inside and outside, -----	4	4	5	2	6	6	3	3	2	3	4		42	

TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
Inside													
Miners, -----			2				1	2	1			1	7
Miners' laborers, -----				1				1					3
Drivers and runners, -----							1						1
Company men, -----						2		1					3
Totals, -----			2	1		2	2	4	2			1	14
Outside													
Slatepickers (boys), -----				1							1		2
All other employes, -----	1			1		1				1			4
Totals, -----	1			2		1				1	1		6
Grand totals inside and outside,--	1		2	3		3	2	4	2	1	1	1	20

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
Inside													
Fire bosses and assistants, -----								1					1
Miners, -----	3	2	1	2	4		1	1	2	1			19
Miners' laborers, -----		1				1	1				1		3
Drivers and runners, -----						3		1					3
Company men, -----											1		1
All other employes, -----		1	1		1		1			1			5
Totals, -----	3	4	2	2	5	5	3	3	2	2	4		35
Outside													
Slatepickers (boys), -----			1							1			2
All other employes, -----	1		2		1	1							5
Totals, -----	1		3		1	1				1			7
Grand totals inside and outside,--	4	4	5	2	6	6	3	3	2	3	4		42

TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
American, -----	1			1		2	1	4			1		10
Irish, -----							1						1
Hungarian, -----				1		1				1		1	4
Italian, -----				1									1
Slavonian, -----			2	1									2
Lithuanian, -----									1				1
Austrian, -----									1				1
Totals, -----	1		2	3		3	2	4	2	1	1	1	20

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
American, -----	1	3	2	1	2	1	1	1	1		1		14
English, -----						1		1					2
Welsh, -----				1	1								2
Irish, -----					1					1			2
Polish, -----								1					1
Hungarian, -----	1		2		1		1				1		6
Italian, -----	1												1
Slavonian, -----						3	1		1	2			7
Lithuanian, -----	1				1	1							4
Austrian, -----		1	1		1	1					1		5
Russian, -----											1		1
Totals, -----	4	4	5	2	6	6	3	3	2	3	4		42

TABLE I.—Operators and mines, kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents, and number of persons employed inside

Names of Operators and Mines	Kind of opening	Gasous or non-gasous	Method of ventilation	Diameter of fan in feet	Width of blades in feet	Depth of blades in feet	Number of revolutions per minute	Water gauge developed—in inches	Name of fan	Power used	Number of splits of air currents	Number of cubic feet of air per minute entering the mine at inlet	Total quantity of air per minute circulating in all the splits in cubic feet	Number of cubic feet per minute passing out at outlet	Number of persons employed inside
Lehigh Coal and Navigation Co.															
Colliery No. 1:	Tunnel, ---	Gasous, ---	Fan, ---	15	5	3.9	72	1.2	Guibal, ---	Steam, ---	6	70,600	60,850	---	236
Number 1,	Shaft, ---	Gasous, ---	Fan, ---	24	8	6	65	.9	Guibal, ---	Steam, ---	8	122,745	78,965	---	143
Number 2,	Slope, ---	Gasous, ---	Fan, ---	16	8	4	120	1.2	Guibal, ---	Steam, ---	2	19,700	16,000	---	43
Number 3,	Drift, ---	Gasous, ---	Natural, ---	---	---	---	---	---	---	---	1	---	---	---	---
Birds Eye,															
Colliery No. 4:	Slope, ---	Gasous, ---	Fan, ---	24	8	7	75	1.8	Co. make, ---	Electricity, ---	3	113,360	97,811	---	391
Number 4,*	Shaft, ---	Non-gas., ---	Fan, ---	10	5	1.6	70	---	Sturdevant, ---	Steam, ---	---	---	---	---	---
Number 5,	Shaft, ---	Gasous, ---	Fan, ---	21	7	5.3	50	---	Guibal, ---	Steam, ---	---	78,248	69,061	---	184
Number 6,	Shaft, ---	Gasous, ---	Fan, ---	24	8	6	96	1.7	Guibal, ---	Steam, ---	3	58,560	45,300	---	170
Number 7,	Shaft, ---	Gasous, ---	Fan, ---	24	8	6	75	1.5	Guibal, ---	Steam, ---	4	80,850	71,300	---	183
Number 8,	Shaft, ---	Gasous, ---	Fan, ---	24	8	6	70	1.9	Guibal, ---	Steam, ---	4	58,620	48,938	---	159
Number 8,	Slope, ---	Gasous, ---	Fan, ---	24	8	6	70	---	---	---	---	---	---	---	---
Number 8,															
Number 8,															
Number 8,															
Colliery No. 10:	Slope, ---	Gasous, ---	Fan, ---	24	8	6	84	2.2	Guibal, ---	Steam, ---	4	55,900	43,750	---	149
Number 10,	Tunnel, ---	Gasous, ---	Fan, ---	12	4	4	75	---	---	---	---	---	---	---	---
Number 10,	Shaft, ---	Gasous, ---	Fan, ---	24	8	6	84	2	Guibal, ---	Steam, ---	4	69,500	58,500	---	200
Number 10,	Slope, ---	Gasous, ---	Fan, ---	24	8	6	84	2	Guibal, ---	Steam, ---	5	---	---	---	---

*New shafts driving tunnels.

Colliery No. 11: Number 11, Fosters, Colliery No. 14: Number 14,*	Shaft, Tunnel, Shaft,	Gaseous, Gaseous, Non-gas.,	Fan, Fan, Fan,	24 21 10	8 7 5	6 5.3 1.6	68 36 70	2 .8	Guibal, Guibal, Sturdevant,	Steam, Steam, Steam,	3 3	90,560 54,190	81,600 37,680	250 110
Estate A. S. Van Winkle Coleraine Colliery: Buck Mountain, No. 7, Gamma,	Slope, Slope,	Gaseous, Non-gas.,	Fan, Fan,	16	4	5	85		Guibal,	Steam,	6	62,570	51,655	166
Coxe Bros. and Co., Inc. Beaver Meadow Colliery: Number 2, Number 4,	Slope, Slope,	Non-gas., Non-gas.,	Fan, Fan,	20 12	6 5	5.6 5.8	90 100		Guibal, Guibal,	Steam, Steam,	1 4	16,420 44,530	10,200 34,080	4 82

Note—12 non-gaseous mines where robbing is done and no air measurements taken.

*New shafts, driving tunnels.

TABLE 1.—Operators, location of collieries, railroads, etc.

Names of Operators and Collieries	County	Name of General Superintendent	Post Office	Name of Superintendent	Post Office	Railroad to Mine
Lehigh Coal and Navigation Co.	Carbon,	Baird Snyder, Jr.,	Lansford,	Hood McKay,	Lansford,	C. R. R. of N. J.
Colliery No. 1,	Carbon,					
Colliery No. 4,	Carbon,					
Colliery No. 5,	Carbon,					
Colliery No. 6,	Carbon,					
Colliery No. 8,	Schuylkill,					
Colliery No. 9,	Carbon,					
Colliery No. 10,	Schuylkill,					
Colliery No. 11,	Schuylkill,					
Colliery No. 14,	Schuylkill,	Baird Snyder, Jr.,	Lansford,	W. G. Whildin,	Lansford,	C. R. R. of N. J.
No. 12 Washery,	Schuylkill,					
No. 15 Washery,	Schuylkill,					
Screen Building,	Carbon,					
Estate A. S. Van Winkle Coleraine,	Carbon,	John Harvey,	Hazleton,			L. V. and C. R. R. of N. J.
Coxe Brothers and Co., Inc. Beaver Meadow,	Carbon,	S. D. Warriner,	Wilkes-Barre,	W. H. Davies,	Hazleton,	Lehigh Valley
Beddall Brothers and Co. Greenwood No. 13,	Schuylkill,	M. A. Gerber,	Tamaqua,			C. R. R. of N. J.
Evans Colliery Co. Evans Washery,	Carbon,	W. E. Smith,	Hazleton,	H. E. Rissinger,	Hazleton,	Lehigh Valley
Hacklebernie Coal Co. Hacklebernie Tunnel,	Carbon,	D. S. Pursell,	Mauch Chunk,			C. R. R. of N. J.
Black Rock, Moses Neyer	Carbon,	Moses Neyer,	Summit Hill,	Elmer Neyer,	Summit Hill,	
Adams Drift,* Frank Adams	Carbon,	Frank Adams,	Summit Hill,			
Lehigh Valley Coal Co. Leivston Washery,	Carbon,	S. D. Warriner,	Wilkes-Barre,	W. H. Davies,	Hazleton,	Lehigh Valley

*Abandoned November 27.

TABLE 2.—Number of tons of coal mined, number of days worked, number of persons employed, number killed and injured, quantity of powder and dynamite used, etc.

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Number of kegs of powder used	Number of pounds of dynamite used	Number of horses and mules
Lehigh Coal and Navigation Co.												
Colliery No. 1,	Carbon,	344,745	31,995	4,682	351,422	234	1,055	4	—	1,380	252,600	105
Colliery No. 4,	Carbon,	241,304	45,648	7,937	294,969	221	749	2	4	—	54,200	42
Colliery No. 5,	Carbon,	171,350	15,976	4,875	192,201	230	337	—	—	150	65,385	21
Colliery No. 6,	Carbon,	360,306	33,664	10,313	404,283	232	850	—	2	25	133,650	56
Colliery No. 8,	Schuylkill,	191,783	32,035	12,124	435,942	233	719	—	—	—	114,375	74
Colliery No. 9,	Carbon,	329,325	31,431	11,786	415,855	234	630	1	4	—	92,300	39
Colliery No. 10,	Schuylkill,	404,651	47,432	9,783	462,065	228	940	3	14	—	160,375	61
Colliery No. 11,	Schuylkill,	313,653	33,047	10,380	357,259	228	736	3	4	—	107,025	73
Colliery No. 14,	Schuylkill,	55,056	20,310	287	55,663	121	294	—	1	—	66,500	27
Screen building,	Schuylkill,	—	—	—	—	—	—	2	—	—	—	—
		2,632,356	292,451	74,883	2,999,690	—	6,310	16	31	1,555	1,046,410	498
No. 12 Washery,	Schuylkill,	2,781	1,503	111	4,898	—	93	—	—	—	—	—
No. 15 Washery,	Schuylkill,	23,136	4,792	1,396	29,824	—	58	—	—	—	—	6
		25,917	6,298	1,507	33,722	—	151	—	—	—	—	6
Totals,		2,658,273	298,749	76,390	3,033,412	—	6,461	16	31	1,555	1,046,410	504
Coleraine,	Carbon,	270,473	45,060	3,105	318,638	303	763	2	6	3,650	75,425	91
Beaver Meadow,	Carbon,	221,611	41,178	2,055	264,844	228	443	2	3	3,018	63,488	33
Estate A. S. Van Winkle												
Coxe Brothers and Co., Inc.												

TABLE 2.--Continued

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Number of kegs of powder used	Number of pounds of dynamite used	Number of horses and mules
Beddall Brothers and Co. Greenwood No. 13, -----	Schenykill, -----	105,612	2,850	14,539	123,001	243	137	-----	1	8	5,600	10
Hacklebernie Coal Co. Hacklebernie Tunnel, -----	Carbon, -----	2,712	180	6,318	9,210	251	26	-----	-----	-----	6,000	2
Black Rock, ----- Moses Neyer	Carbon, -----	-----	120	5,207	5,387	288	14	-----	1	-----	1,600	-----
Adams Drift, ----- Frank Adams	Carbon, -----	-----	60	2,584	2,644	250	10	-----	-----	25	500	1
Evans Washery, ----- Evans Colliery Co.	Carbon, -----	39,465	5,000	300	44,765	-----	28	-----	-----	-----	25	-----
Leviston Washery, ----- Lehigh Valley Coal Co.	Carbon, -----	27,267	-----	-----	27,267	-----	30	-----	-----	-----	-----	-----
Grand totals, -----	-----	3,325,413	393,197	110,558	3,829,108	-----	7,912	20	42	8,856	1,199,048	641

TABLE 2. — Part 2

Names of Operators	County	Number of Boilers				Locomotives			Number of steam engines of all classes	Total horse power	Number of pumps delivering water to surface	Capacity in gallons per minute	Quantity delivered to surface per minute—gallons	Number of electric dynamos	Number of air compressors	
		Cylindrical	Horse power	Tubular	Horse power	Total horse power	Steam	Air								Electric
Lehigh Coal and Navigation Co.,	Carbon	3	186	119	26,064	26,250	14	19	23	167	9,468	*18	35,697	11,254	5	10
Estate A. S. Van Winkle,	Schuylkill	---	---	21	2,315	2,315	6	---	---	36	1,340	---	7,347	2,466	1	---
Coxe Brothers and Co., Inc.,	Carbon,	---	---	10	2,000	2,000	6	1	---	34	1,800	---	1,200	1,100	2	---
Beddall Brothers and Co.,	Schuylkill,	---	---	8	540	540	2	---	---	12	192	---	---	---	---	---
Hacklebarne Coal Co.,	Carbon,	---	---	1	60	60	---	---	---	1	40	---	---	---	---	---
Moses Neyer,	Carbon,	---	---	1	35	35	---	---	---	2	30	---	---	---	---	---
Frank Adams,	Carbon,	1	20	---	---	---	---	---	---	1	---	---	---	---	---	---
Evans Colliery Co.,	Carbon,	---	---	1	350	350	---	---	---	3	140	---	1,500	---	---	---
Lehigh Valley Coal Co.,	Carbon,	---	---	1	---	---	---	---	---	3	180	---	---	---	---	---
Totals,	---	4	206	161	31,364	31,570	28	20	23	259	13,140	28	45,744	16,320	8	12

*Nine tanks.

Table 3.—Number of each class of employes inside and outside of mines

Names of Operators and Collieries	County	Inside											Outside											Grand total inside and outside
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Doorboys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Foremen	Blacksmiths and carpenters	Engineers and firemen	State pickers (boys)	State pickers (men)	Bookkeepers and clerks	All other employes	Total outside			
Lehigh Coal and Navigation Co.	Carbon	4	1	8	157	75	55	11	6	335	144	796	---	2	5	35	11	17	5	184	259	1,055		
Colliery No. 1	Carbon	1	1	4	33	22	26	9	8	112	251	408	---	2	13	45	49	42	1	128	281	749		
Colliery No. 4	Carbon	1	1	4	70	42	14	1	3	57	113	303	---	2	4	4	---	---	27	34	337	---		
Colliery No. 5	Carbon	1	1	6	74	72	31	4	3	120	165	478	---	3	22	33	41	55	4	212	372	850		
Colliery No. 6	Carbon	2	1	5	129	11	31	13	3	94	165	453	---	3	11	26	26	51	4	145	266	719		
Colliery No. 8	Schuylkill	2	1	3	122	42	29	6	3	75	114	397	---	2	11	21	26	30	3	140	233	630		
Colliery No. 9	Carbon	1	1	2	167	43	41	28	4	125	254	670	---	2	18	36	29	34	3	148	270	940		
Colliery No. 10	Schuylkill	2	0	9	124	34	41	8	4	113	188	563	---	1	15	24	45	8	2	108	213	736		
Colliery No. 11	Schuylkill	1	1	5	5	10	7	---	3	7	134	188	---	1	3	22	8	1	1	70	106	294		
Colliery No. 14	Schuylkill	17	6	46	881	351	275	80	33	1,039	1,548	4,276	---	16	100	256	235	238	27	1,162	2,034	6,310		
Washeries	Schuylkill	---	---	---	---	---	---	---	---	---	---	---	---	1	4	9	24	12	---	43	93	93		
No. 12 Washery	Schuylkill	---	---	---	---	---	---	---	---	---	---	---	---	1	2	2	8	---	---	45	58	58		
No. 15 Washery	Schuylkill	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---		
Totals	Carbon	17	6	46	881	351	275	80	33	1,039	1,548	4,276	---	16	100	256	235	238	27	1,162	2,034	6,310		
Estate A. S. Van Winkle Coleraine	Carbon	4	1	4	193	164	36	2	6	53	---	463	---	2	6	11	32	12	---	88	151	151		
Coxe Brothers and Co., Inc. Beaver Meadow	Carbon	1	5	---	115	28	15	4	1	73	33	275	---	1	11	23	15	27	4	87	168	443		

Beddall Brothers and Co.	1	13	9	2		5	30	1	1	5	9	15		1	75	107	137			
Greenwood No. 13,																				
Schnykill,																				
Hacklebernie Coal Co.	1	9	3	2		2	17	1	1	1	2	2	3	1	1	9	26			
Hacklebernie Tunnel,																				
Moses Neyer	1	4	4				9	1				1			3	5	14			
Black Rock,																				
Frank Adams	1	1	5	1			8								2	2	10			
Adams Drift,																				
Evans Colliery Co.	1						1	1	1	2	3				20	27	28			
Evans Washery,																				
Lehigh Valley Coal Co.																				
Leviston Washery,																				
Carbon,																				
Grand totals,	27	50	1,216	564	331	86	40	1,170	1,583	5,079	4	25	142	343	343	295	41	1,640	2,833	7,912

TABLE 4.—Fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Mine	County	Nature and Cause of Accident in Brief
Jan. 25	Frank Schmeer, -----	American, ---	Patcher, -----	19	S.	-----	-----	Beaver Meadow No. 2,	Carbon, -----	Fatally injured by falling under car. The car became derailed just as he attempted to jump on it. Died next day. Outside.
Mar. 3	Vincent Coates, -----	Slavonian, -----	Miner, -----	35	M.	1	6	Nesquehoning No. 1 Tunnel,	Carbon, -----	Instantly killed by rush of water from an old gangway broken into while driving Breast No. 10 in East Mammoth gangway.
3	John Ripp, -----	Slavonian, -----	Miner, -----	32	M.	1	4			
April 18	Mike Vetich, -----	Hungarian, -----	Laborer, -----	24	S.	-----	-----	L. C. and N. Co. Screen Building,	Carbon, -----	Fatally injured by falling under car. He was employed cleaning roads and had left his work to get a drink of water. He jumped on a trip of cars running to the weigh scales and in attempting to cross over front end of car fell off. Outside.
22	Frank Dagnustin, -----	Italian, -----	Laborer, -----	30	M.	1	2	Coleraine, -----	Carbon, -----	Instantly killed by fall of slate in face of gangway. He was at work cleaning up in the face of the West Mammoth gangway in florid slope, preparatory to making hitches for a set of timber when the slate fell on him.
27	Michael L. Boyle, -----	American, ---	Slatepicker, --	15	S.	-----	-----	Coaldale No. 10, ---	Schuylkill, -----	Killed by falling into scraper line on breaker. Outside.
June 1	Andrew Krisnoskey, -----	Hungarian, -----	Jig-runner, --	18	S.	-----	-----	Coleraine, -----	Carbon, -----	Instantly killed by being caught and whirled around a line shaft in breaker. Outside.
2	Lewis Hughes, -----	American, ---	Locomotive fireman, -----	19	S.	-----	-----	Coaldale No. 10, ---	Schuylkill, -----	Fatally injured between cars. He was running an empty trip, sitting on front car and was asked to take a loaded car out with him. He evidently forgot his orders and ran into the car which was on the track ahead of him.

TABLE 4.—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Mine	County	Nature and Cause of Accident in Brief
June 23	Edward Brimmer, ----	American,--	Loader, -----	23	S.	----	----	Coaldale No. 10, --	Schuylkill, ----	Fatally injured between car and gangway. While riding on the bumper in the West Mammoth gangway he allowed his body to extend beyond the side of the car and was caught against the gangway. Died June 25.
July 3	Joseph Shovellin, ----	Irish,-----	Miner, -----	38	M.	1	2	Lansford No. 4, --	Carbon,-----	Instantly killed by trip of loaded cars. He stood up on motor and in reaching for his dinner can on car that had been detached from the motor he fell on track and was run over.
15	John P. Sharp, -----	American,--	Driver, -----	22	S.	----	----	Coaldale No. 8, --	Schuylkill, ----	Fatally injured by being kicked by a mule. He was driving a three-mule team in the East Mammoth gangway at the time. His skull was fractured. No one saw the accident. He died next day.
Aug. 6	Dennis Bonner, ----- George Gaddis, -----	American, American,--	Miner, Laborer, -----	37 26	M. M.	1 1	2	Nesquehoning No. 1 Tunnel,	Carbon,-----	Instantly killed by premature blast. They with others were employed by contractors Helster and Williams, driving the Southwest tunnel from No. 2 to No. 1 shaft, under the supervision of walking boss John O'Donnell. O'Donnell had noticed a Hungarian arranging the battery wires preparatory to firing the first round of holes. He reprimanded Bonner, the charge-man, for allowing the Hungarian to do this work and warned him that if any one was caught doing anything with the battery while it was

in use he, Bonner, would be discharged at once. Disregarding the warning, Bonner allowed Mike Holick, a man who could not speak English, to fire the second round, after which Bonner and Gaddis went to the face and charged four holes and made wire connections for the third round when Holick, who was still at the battery, called to Andrew Vallant, a mucker boss (who with other men had just come into the tunnel where Holick was), asking if it was all right to fire and he understood Vallant to answer "All right, fire, my men all out." He took this as meaning that the men were out from the face and he then made the fatal mistake of pulling the battery, which exploded the holes, killing both men. Holick said that Bonner always had him pull the battery so that he, Bonner, could get away as he could not stand the noise. In this instance he thought that Bonner had gone away as usual.

Killed by face of coal. While barring down a piece of coal on the outside of his breast his partner warned him that he heard indications of the coal falling, but before Morgans could get away the coal fell.

Suffocated by a rush of coal in 148 man-way. He had been told to let the coal alone until examined by the fire boss but failed to do so.

Fatally burned by gas while working in a gangway in West Mammoth air course. He was sent for help to lift a collar and when returning went into an old chute where there was gas, with his naked lamp. Died September 17.

Instantly killed by premature explosion. He was diving the East G, south dip gangway and in tamping a hole used an iron scraper and exploded the dynamite. Fatally injured by railroad cars. While crossing the tracks he was run down by a loaded gondola. The brakeman at rear end of car could not see him. Outside.

Aug. 10	Richard Morgans,	American,	Miner,	30	S.	Lansford No. 9,	Carbon,
20	Daniel Gallagher,	American,	Batteryman,	40	M.	Coaldale No. 11,	Schuylkill,
Sept. 8	Anthony Toga,	Lithuanian,	Laborer,	30	M.	Coaldale No. 11,	Schuylkill,
11	Flora Tomis,	Austrian,	Miner,	28	S.	Coaldale No. 11,	Schuylkill,
Oct. 16	Mike Meetrick,	Hungarian,	Laborer,	43	M.	L. C. and N. Co. Screen Building.	Carbon,

TABLE 4.—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Mine	County	Nature and Cause of Accident in Brief
Nov. 20	John Kline, -----	American,--	Slatepicker, --	15	S.	-----	-----	Lansford No. 4, --	Carbon,-----	Fatally injured by being caught and carried around a chestnut coal shaft on breaker. He left his work and for some unknown reason climbed up seven feet from the floor and was caught by shaft. Outside.
Dec. 10	Rhs Kessler, -----	Hungarian,	Miner, -----	37	M.	1	2	Beaver Meadow No. 4.	Carbon,-----	Instantly killed by fall of coal while working in Breast 156, of Buck Mountain vein. His partner, after firing a shot that did not bring down the coal went for a charge of powder and on his return found Kessler under the top bench barring down the loose coal. He was warned of the danger but before he could get out the coal fell on him.

TABLE 5.—Non-fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Mine	County	Nature and Cause of Accident in Brief
Jan. 3	John Junots,	Lithuanian,	Miner,	34	S.	Coaldale No. 11,	Schuylkill,	Eye cut by coal flying from pick.
14	John Chernusky,	Hungarian,	Driver,	29	M.	Beaver Meadow No. 2,	Carbon,	Leg bruised by falling under car. Out- side.
22	Harry Kennedy,	American,	Miner,	51	M.	Coaldale No. 8,	Schuylkill,	Face and body lacerated by premature blast.
24	Domnick Cameron,	Italian,	Miner,	33	M.	Beaver Meadow No. 4,	Carbon,	Back bruised by fall of coal.
Feb. 24	Charles Bottomly,	American,	Driver,	20	S.	Coaldale No. 11,	Schuylkill,	Body bruised and injured internally be- tween timber and car.
25	Adam Dickman,	American,	Miner,	44	M.	Coaldale No. 10,	Schuylkill,	(Hands and face slightly burned by ex- plosion of gas.
25	John G. Boyle,	American,	Miner,	39	M.			
29	John Bruzgo,	Russian,	Belman,	19	S.	Lansford No. 4,	Carbon,	Leg fractured by being knocked down by cars.
Mar. 2	John Krisnosky,	Hungarian,	Slatepicker,	15	S.	Coleraine,	Carbon,	Arm fractured by falling from a chute on breaker. Outside.
4	William J. Moyer,	American,	Loader,	21	S.	Greenwood No. 13,	Schuylkill,	Concussion of the brain by falling from car onto rail. Outside.
19	Angelo Christifetto,	Austrian,	Miner,	25	S.	Beaver Meadow No. 2,	Carbon,	Leg fractured by piece of coal falling off the rb.
31	John Gallagher,	American,	Electrician,	22	S.	Coaldale No. 10,	Schuylkill,	Hands and face scalded by receiving pipe blowing out.
31	John Vaggert,	Hungarian,	Laborer,	50	W.	Coaldale No. 10,	Schuylkill,	Head cut and leg bruised by car on break- er dump. Outside.
April 9	Amos Hartranft,	American,	Miner,	34	S.	Coaldale No. 10,	Schuylkill,	(Hands and face burned by explosion of gas.
9	William Morgans,	Welsh,	Miner,	33	S.			
May 9	John Bonner,	American,	Loader,	20	S.	Coaldale No. 11,	Schuylkill,	Eye and face lacerated by explosion. He was supposed he had fired three holes and was returning, when the third went off.
11	Charles McGarvey,	Irish,	Miner,	60	M.	Coleraine,	Carbon,	Leg fractured by rock rolling on him.
19	Mike Folsad,	Hungarian,	Miner,	52	M.	Coleraine,	Carbon,	Hands face and leg burned by explosion of powder. Not serious.
22	Thomas Jones,	Welsh,	Miner,	61	M.	Coaldale No. 8,	Schuylkill,	Leg fractured by rush of coal at battery.

TABLE 5.—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Mine	County	Nature and Cause of Accident in Brief
May 25	George Bajor, -----	Austrian, --	Dumpman, -----	26	S.	Coaldale No. 11, -----	Schuylkill, -----	Finger broken and one taken off between sill and sprag. Outside.
28	John Ketch, -----	American, --	Miner, -----	35	S.	Coaldale No. 14, -----	Schuylkill, -----	Eye and wrist injured by a premature blast.
June 8	Frank Bankosky, -----	Slavonian, --	Driver, -----	20	S.	Coaldale No. 8, -----	Schuylkill, -----	Thumb severed, legs and back bruised by falling under car while driving on dirt bank. Outside.
17	Alexandria Jones, -----	American, --	Driver, -----	21	S.	Coaldale No. 10, -----	Schuylkill, -----	Right leg contused, three toes disjointed on left foot, by his foot being caught between the car wheel and rail.
19	Frederick Carter, -----	English, ----	Batteryman, -----	33	M.	Coaldale No. 10, -----	Schuylkill, -----	Face burned by an explosion of gas in chute.
22	Steve Greger, -----	Slavonian, --	Batteryman, -----	21	S.	Coaldale No. 10, -----	Schuylkill, -----	Face and hands burned by an explosion of gas.
22	John Polity, -----	Slavonian, --	Batteryman, -----	21	M.	Coaldale No. 10, -----	Schuylkill, -----	Leg and wrist broken by fall of roof in tunnel.
30	Mike Ferth, -----	Austrian, --	Laborer, -----	27	M.	Coaldale No. 10, -----	Schuylkill, -----	Wrist broken and head cut. Armature fell on him while repairing motor.
July 1	Morris Fessler, -----	American, --	Motorman, -----	28	M.	Lansford No. 5, -----	Carbon, -----	Wrist pierced by pick while holding a gangway leg while miner was making room for it.
3	Frank Fyala, -----	Slavonian, --	Laborer, -----	22	S.	Coaldale No. 10, -----	Schuylkill, -----	Hands and face burned by an explosion of gas.
13	John Krisanosky, -----	Hungarian, --	Miner, -----	29	M.	Coleraine, -----	Carbon, -----	Collar bones broken by being caught between car and prop.
22	Edward Adams, -----	English, ----	Fire-boss, -----	47	M.	Lansford No. 6, -----	Carbon, -----	Body blown between the timber and car.
24	William Sharp, -----	American, --	Miner, -----	38	M.	Coaldale No. 8, -----	Schuylkill, -----	Left eye blown out, right eye and left leg injured by spark from lamp exploding dynamite caps.
25	Peter Kalbasa, -----	Polish, ----	Driver, -----	18	S.	Lansford No. 4, -----	Carbon, -----	Arms and legs slightly injured by a premature blast.
:Sept. 4	Paul Rovenson, -----	Slavonian, --	Miner, -----	28	M.	Black Rock Slope, -----	Carbon, -----	
11	Isaac Buchanan, -----	American, --	Miner, -----	28	M.	Coaldale No. 10, -----	Schuylkill, -----	

Oct. 15	Paul Romanic, -----	Slavonian,	Mucker boss, ----	26	M.	Coaldale No. 10, -----	Schuylkill, -----	Face and hands lacerated by explosion. Had fired two holes and thought both shot went off. When returning second left leg fractured by fall of coal from face of breast.
17	Condy Gildea, -----	Irisb,-----	Miner, -----	63	M.	Lansford No. 4, -----	Carbon,-----	Left leg and jaw fractured and right shoulder dislocated by a fall from the breaker. Outside.
17	John Hegart, -----	Slavonian,	Slatepicker, -----	16	S.	Lansford No. 6, -----	Carbon,-----	Leg fractured. He had retired to a place of safety, as he thought, but when the shot went off a piece of slate fell off the rib and struck him.
Nov. 8	Mathew Herbert, ----	American,--	Roadman, -----	49	M.	Coleraine, -----	Carbon,-----	Leg fractured and shoulder dislocated by fall of slate.
10	Joseph Powalko, -----	Hungarian,	Miner, -----	28	M.	Coleraine, -----	Carbon,-----	Hands and face burned by an explosion of gas.
21	Andy Martinkovitch,--	Russian,---	Laborer, -----	23	S.	Lansford No. 4, -----	Carbon,-----	Hands, face and body burned by an explosion of gas.
28	Leon Moneta, -----	Austrian,--	Miner, -----	36	M.	Lansford No. 9, -----	Carbon,-----	

CONDITION OF COLLIERIES

LEHIGH COAL AND NAVIGATION COMPANY

Colliery No. 1.—Ventilation and drainage fair, general conditions as to safety, good.

Colliery No. 4.—The general condition of this colliery has greatly improved during the last year, but there is room for improvement in the ventilation in some sections, which is being made.

Colliery No. 5.—Ventilation, drainage and general condition of this colliery good.

Colliery No. 6.—Ventilation, drainage and roads good. General condition as to safety, good.

Colliery No. 8.—Ventilation and general condition as to safety, good.

Colliery No. 9.—Ventilation and drainage fair. General conditions as to safety, good.

Colliers No. 10.—Ventilation good, drainage and roads fair. General conditions as to safety, good.

Colliery No. 11.—Ventilation good, drainage fair. General conditions as to safety, good.

Colliery No. 12.—Has been changed to a washery and is in good condition.

Colliery No. 14.—Ventilation and general conditions good.

Washery No. 15.—In good condition.

ESTATE A. S. VAN WICKLE

Coleraine Colliery.—The principal work done at this colliery is robbing, except in the Buck Mountain and No. 7 Gamma slope. The ventilation, drainage and general conditions as to safety good.

COXE BROTHERS AND COMPANY, INCORPORATED

Beaver Meadow Colliery. Nos. 2 and 4 Slopes.—Ventilation, drainage and roads good. General conditions as to safety good.

BEDDALL BROTHERS AND COMPANY

Greenwood No. 13. Ventilation good. The only work done is robbing.

HACKLEBERNIE COAL COMPANY

Hacklebernie Tunnel.—Ventilation good, drainage fair. General conditions as to safety good.

MOSES NEYER

Black Rock Colliery. Ventilation and drainage good.

W. R. McCREADY

McCready's Colliery.—General conditions as to safety good. The only work done at present is robbing.

EVANS COLLIERY COMPANY

Evans Washery.—In good condition.

IMPROVEMENTS

LEHIGH COAL AND NAVIGATION COMPANY—EASTERN DIVISION

Colliery No. 1.—A new 3,000 ton breaker was completed and put in operation in November and is giving satisfaction, though not yet running to its full capacity.

No. 1 Shaft has been abandoned as a coal hoisting shaft and all coal below water level will be hoisted at No. 2 Shaft in future.

The balance shaft in No. 1 Shaft has been abandoned and the coal from that level is now brought out by way of No. 1 Tunnel.

A four million gallon duplex pump has been installed on the first level of the No. 2 Shaft.

On the whole the facilities at No. 2 Shaft are such that when the car hoist and other improvements under construction are completed its hoisting ability will be second to none in the Panther Valley.

The Lausanne Tunnel has been driven 3,009 feet during the year and is now 5,649 feet long.

Colliery No. 4.—A 24-foot diameter iron cased electrically driven fan has been installed.

One four million gallon duplex pump has been installed.

Colliery No. 5.—While this colliery has always been a Red Ash colliery the company has tunneled on the east and west side of the shaft back to the old workings of No. 4 in the Mammoth vein, where by the systematic driving of chutes they are succeeding in reclaiming a large quantity of coal that was virtually lost in the previous robbing. This of course will add materially to the output of No. 5.

A new timber wharf with saw mill has been completed.

Colliery No. 6.—Work has been commenced on the remodeling of the breaker.

A very complete installation of fire lines has been made about the colliery.

A new plane has been driven from the shaft level to the plane level.

Colliery No. 9.—No. 9 shaft has been completed and tunnel started north and south.

A new breaker at this colliery, to take the coal of Nos. 8 and 9, is nearly completed.

Work has been commenced on the installation of two new pairs of hoisting engines, one 36x60 and one 17x36, in a new concrete engine house.

WESTERN DIVISION

Colliery No. 10.—A second pair of 42x60 engines for water hoist was installed.

Five electric motors with the necessary rotary converter have been installed.

Gangways are being opened in the water level and one lift below in the West Mammoth top split, south of the shaft anticlinal and a slope is being sunk from the surface to handle the output from the second level.

In the shaft level two tunnels were driven from the Mammoth to the Primrose, and water in collieries Nos. 12 and 14 successfully tapped.

Gangways are being driven in Buck Mountain vein for use as haulageways.

A new colliery warehouse and offices have been erected.

A Cochran feed water heater is being installed at the boiler house.

No. 14 Colliery.—A new level in the shaft at 600 feet above tide has been made and tunnels are being driven north and south across the basin.

A new air shaft, $7\frac{1}{2}$ feet by 14 feet, is being sunk at a point 1,100 feet north of the coal shaft.

A slope is being sunk in the Orchard vein 4,000 feet south of the coal shaft to hasten the opening work on veins on the south dip and the driving of tunnel across the basin. The slope will later be used as a plane.

The Company has attached to all cages a special device in the shape of safety rods or attachments that may be raised or lowered at will, making it practically impossible for men to meet with an accident while being hoisted or lowered on the cage. All cages have been tested at various times with very satisfactory results.

Every colliery of this company has shown a marked increase in average daily output of 10 hours from 11,486 in 1897 to 12,643 tons in 1908.

ESTATE A. S. VAN WICKLE

Coleraine Colliery.—A 175 H. P. Return tubular boiler has been installed at the No. 1 boiler plant.

No. 2 Old Slope, Wharton vein. A slope has been sunk from the surface 140 feet on an angle of 16 degrees to take coal from the stripping.

No. 2 Old Slope, Mammoth vein. A slope has been sunk 250 feet long to take the coal from the No. 2 Old Slope, part of the Old Slope being abandoned for the purpose of stripping. The old hoisting engines with all steam connections have been removed to the New Slope.

No. 2 New Mammoth Slope.—A mule stable has been made in this slope to hold ten mules.

No. 6 Wharton vein.—Sinking a rock slope from the Gamma to the Buck Mountain vein, which is down 135 feet.

Flory Slope, Mammoth vein.—A slope 100 feet has been sunk to connect the underlap of the Mammoth vein with the main hoisting slope. Two rock chutes have been driven from the underlap to the vein above, 45 feet each on a pitch of 35 degrees.

No. 3 Mammoth vein.—300 feet of cribbing 20 feet high has been put in along the north outcrop of the No. 3 Mammoth vein stripping to protect the breaker.

COXE BROTHERS AND COMPANY, INCORPORATED

Beaver Meadow Colliery-Slope No. 2.—The Barney track has been extended to the bottom of the basin on elevation of the drainage tunnel, and self-acting bottom turnouts put in. The air motor is now bringing the No. 2 coal and West End Slope No. 4 coal to the foot of the Main Hoisting Slope, which saves about one and one-half miles

of outside haul. This service will be gradually extended, so that Slope No. 4 will be used for a tender slope only and to hoist the counter coal on that slope. An airway was driven in the Buck Mountain vein on line of the 975 foot tunnel mentioned in last year's report, and reached the surface at 680 feet, the vein running from 2 feet 3 inches to 2 feet 9 inches coal. A 300 foot tunnel was driven from the Wharton to the South, near top of No. 5 Slope, which penetrated the Gamma, and the top split of the Buck Mountain, and is extended now to the bottom bench of the Buck Mountain. This tunnel splits a 600 foot lift and will ventilate, by gangways to be driven east and west, the lower workings.

A slant tunnel has been started to the north on the West Buck Mountain gangway, which will tap the submerged slope No. 3 Wharton workings and finally drain Underground Slope No. 5 workings.

Outside

Little work was done extending the No. 8 Stripping, in which a steam shovel is worked by the company. The Greenfield Strippings have been continued and 65,553 yards moved during 1908, bringing the total moved to 839,748 yards. These Stripping operations will be completed by the middle of 1909, when a new section will be started.

EVANS COLLIERY COMPANY

The washery reported in my last report has been completed and the banks washed up. The company is now pumping the water out of the old slope which they propose reopening.

LEHIGH VALLEY COAL COMPANY

Leviston.—The Company has erected a washery at this place having a capacity of 600 tons per day for the purpose of preparing bank coal. The first shipment was made on October 16, 1908.



Eighteenth District

SCHUYLKILL COUNTY

Pottsville, Pa., March 6, 1909.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor of transmitting herewith my annual report as Inspector of Mines of the Eighteenth Anthracite District, for the year ending December 31, 1908.

Respectfully submitted,

JOHN CURRAN,
Inspector.

SUMMARY OF STATISTICS

Number of collieries,	18
Number of mines,	41
Number of mines in operation,	41
Number of tons of coal shipped to market,	2,385,694
Number of tons used at mines for steam and heat,	361,111
Number of tons sold to local trade and used by employes, ..	28,564
Number of tons produced,	2,775,369
Number of tons produced by compressed air machines,	—
Number of tons produced by electrical machines,	—
Number of persons employed inside of mines,	4,488
Number of persons employed outside,	2,497
Number of fatal accidents inside of mines,	26
Number of fatal accidents outside,	5
Number of non-fatal accidents inside of mines,	57
Number of non-fatal accidents outside,	19
Number of tons of coal produced per fatal accident inside,	106,745
Number of persons employed per fatal accident inside,	173
Number of persons employed per fatal accident outside, ..	499
Number of persons employed per non-fatal accident inside,	79
Number of persons employed per non-fatal accident out- side,	131
Number of wives made widows,	17
Number of children orphaned,	33
Number of steam locomotives used inside of mines,	1
Number of steam locomotives used outside,	30
Number of compressed air locomotives used inside,	6
Number of electric motors used inside,	6
Number of fans in use,	31
Number of gaseous mines in operation,	23
Number of non-gaseous mines in operation,	18

TABLE A

PRODUCTION OF COAL

Names of Operators	Tons
Lehigh and Wilkes-Barre Coal Company,	666,890
Mill Creek Coal Company,	660,446
Philadelphia and Reading Coal and Iron Company,	524,969
Coxe Brothers and Company, Incorporated,	285,677
Dodson Coal Company,	195,750
Truman M. Dodson Coal Company,	151,499
Maryd Coal Company,	97,123
East Lehigh Coal Company,	61,908
Phillips Coal Company,	41,540
Big Creek Coal Company,	41,488
Port Carbon Coal Company,	27,020
Gorman and Campion,	17,983
William Cook,	3,076
Total,	<u>2,775,369</u>

Production by Counties

Schuylkill,	<u>2,775,369</u>
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TABLE B.—Fatal and non-fatal accidents inside and outside of mines; number of tons of coal produced per accident; number of persons employed; number employed per accident

Names of Operators	Fatal Accidents			Non-fatal Accidents			Tons of coal produced per fatal accident inside	Tons of coal produced per non-fatal accident inside	Total number of employees	Number of employees inside	Number of employees outside	Number of employees inside per fatal accident	Number of employees outside per fatal accident	Number of employees inside per non-fatal accident	Number of employees outside per non-fatal accident
	Fatal Accidents		Non-fatal Accidents		Total	Total									
	Inside	Outside	Inside	Outside											
Lehigh and Wilkes-Barre Coal Co.,	3	3	6	8	4	12	83,361	1,658	1,180	508	393	169	147	127	
Mill Creek Coal Co.,	8	1	9	23	---	23	98,715	1,096	630	406	86	406	30	---	
Philadelphia and Reading Coal and Iron Co.,	5	1	6	8	2	10	65,021	1,758	1,214	514	243	544	152	272	
Coxe Brothers and Co., Inc.,	3	---	3	3	7	10	95,225	661	412	249	137	541	137	36	
Dodson Coal Co.,	2	---	2	3	1	4	65,250	518	288	230	144	---	137	290	
Truman M. Dodson Coal Co.,	2	---	2	6	1	7	25,249	393	212	181	106	---	35	181	
Maryd Coal Co.,	---	---	---	2	4	6	49,561	414	272	142	---	---	136	35	
East Lehigh Coal Co.,	1	---	1	---	---	---	---	90	33	57	33	---	---	---	
Phillips Coal Co.,	1	---	1	2	---	---	---	42	42	45	42	---	---	---	
Big Creek Coal Co.,	---	---	---	2	---	---	---	112	45	67	42	---	---	---	
Pert Carbon Coal Co.,	---	---	---	2	---	---	20,744	88	59	29	88	---	---	---	
William Cook Coal Co.,	1	---	1	---	---	---	13,510	7	7	7	7	---	---	---	
Miscellaneous companies,	---	---	---	---	---	---	---	3,076	34	32	---	---	---	---	
Totals and averages for district,	26	5	31	57	19	76	48,691	6,985	4,488	2,407	173	499	79	131	

TABLE C.—Classification of Fatal Accidents Inside and Outside of Mines

	Months												Percentages	
	January	February	March	April	May	June	July	August	September	October	November	December		Totals
Causes of Accidents Inside														
Falls of coal, -----						1			1	1			3	11.54
Falls of slate, -----	1		2			2	1			2			6	30.76
Mine cars, -----		1	1		1		1	1	1				5	23.07
Explosions of gas and dust, -----		2								1			3	11.54
Explosions of powder and dynamite, -----	1										1		2	7.69
Premature blasts, -----		1											1	3.85
Falling into shafts, -----		1											1	3.85
Crushed at batteries, -----											1		1	3.85
Mules, -----								1					1	3.85
Totals, -----	2	5	3		1	3	2	2	2	3	2	1	26	100.00
Causes of Accidents Outside														
Cars, -----		1								1	2		4	80.00
Miscellaneous, -----	1												1	20.00
Totals, -----	1	1								1	2		5	100.00
Grand totals inside and outside, -----	3	6	3		1	3	2	2	2	4	4	1	31	

TABLE D.—Classification of Non-fatal Accidents Inside and Outside of Mines

	Months												Percentages	
	January	February	March	April	May	June	July	August	September	October	November	December		Totals
Causes of Accidents Inside														
Falls of coal, -----		1			3	2	1	1	1				9	15.79
Falls of slate, -----		2	1				2	2	1	1			8	14.03
Mine cars, -----	1	1		1	3		1			1	1	1	11	19.30
Explosions of gas and dust, -----		1		3				3			1	1	9	15.80
Explosions of powder and dynamite, -----	1		1									1	3	5.26
Premature blasts, -----			1	1		1	1	3	2	1			10	17.54
Miscellaneous, -----	1	2	2			2							7	12.28
Totals, -----	3	7	5	5	6	5	5	7	6	3	2	3	57	100.00
Causes of Accidents Outside														
Cars, -----		2	1							1	1		5	26.31
Machinery, -----	1				2	1							4	21.05
Boiler explosions, -----		2											2	10.53
Miscellaneous, -----	1	1	2		2		1	1					8	42.11
Totals, -----	2	5	3		4	1	1	1		1	1		19	100.00
Grand totals inside and outside, -----	5	12	8	5	10	6	6	8	6	4	3	3	76	

TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
Inside													
Miners, -----	1	2				3		1	1	2	2		12
Miners' laborers, -----	1	1	2				1	1	1	1		1	7
Drivers and runners, -----							1	1	1				3
Doorboys and helpers, -----			1		1								2
Company men, -----		1											1
All other employes, -----		1											1
Totals, -----	2	5	3		1	3	2	2	2	3	2	1	26
Outside													
Blacksmiths and carpenters, -----										1			1
All other employes, -----	1	1									2		4
Totals, -----	1	1								1	2		5
Grand totals inside and outside, -----	3	6	3		1	3	2	2	2	4	4	1	31

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
Inside													
Miners, -----	2	5	4	4	3	4	1	5	4	2	2	3	39
Miners' laborers, -----		1		1	1	1	1	2	1	1			7
Drivers and runners, -----					2	1	2		1	1			7
Company men, -----			1										1
All other employes, -----	1	1					1						3
Totals, -----	3	7	5	5	6	5	5	7	6	3	2	3	57
Outside													
Blacksmiths and carpenters, -----	1												1
Engineers and firemen, -----		1											1
Slatepickers (boys), -----			1		2	1							4
All other employes, -----	1	4	2		2	1	1		1	1			13
Totals, -----	2	5	3		4	1	1	1		1	1	3	19
Grand totals inside and outside, -----	5	12	8	5	10	6	6	8	6	4	3	3	76

TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
American, -----		2	1			1		1	1	1			7
Irish, -----		1											1
German, -----					1								1
Polish, -----	1	1					1			1			6
Hungarian, -----		1	1			1					1		5
Italian, -----	1	1						1					3
Lithuanian, -----						1			1	2	1	1	6
Austrian, -----			1										1
Russian, -----	1	1											2
Totals, -----	3	6	3		1	3	2	2	2	4	4	1	31

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
American, -----	2	2	1		3	3	1		2	1	1		16
English, -----					1								1
Welsh, -----			1										1
Irish, -----					1								1
Polish, -----	1	3		2	2	1	2	6	1	1		2	21
Hungarian, -----		2	1	1	1	1	2						8
Italian, -----			2					1	1	1			5
Slavonian, -----		2	1		1	1	1						6
Lithuanian, -----	1	2	1	2				1	2	1	2	1	13
Russian, -----	1	1	1		1								4
Totals, -----	5	12	8	5	10	6	6	8	6	4	3	3	76

TABLE I.—Operators and mines, kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents, and number of persons employed inside

Names of Operators and Mines	Kind of opening	Gaseous or non-gaseous	Method of ventilation	Diameter of fan in feet	Width of blades in feet	Depth of blades in feet	Number of revolutions per minute	Water gauge developed—in inches	Name of fan	Power used	Number of splits of air currents	Number of cubic feet of air per minute entering the mine at inlet	Total quantity of air per minute circulating in all the splits in cubic feet	Number of cubic feet per minute passing out at outlet	Number of persons employed inside
Lehigh and Wilkes-Barre Coal Co.															
Aunderfird No. 4 Colliery:															
Number 11, -----	Slope, ---	Gaseous,	Fan, -----	16	4.2	3.8	95	.8	Guibal, --	Steam, ---	5	105,000	105,000	536	
Number 16, -----	Slope, ---	Gaseous,	Fan, -----	12	4	3.6	90	.7			2	49,000	49,000		
Number 21, -----	Slope, ---	Gaseous,	Fan, -----	15	4.6	5	45	.4			2	39,000	39,000		
Honey Brook No. 5 Colliery:															
Number 15, -----	Slope, ---	Gaseous,	Fan, -----	15	4.4	4.4	75	.8			4	54,000	54,000		
Number 25, -----	Slope, ---	Non-gas.,	Natural,												
Number 20, -----	Slope, ---	Gaseous,	Fan, -----	8	2.10	2.3	65	.8	Guibal, --	Steam, ---	3	28,800	28,800		
Green Mountain, -----	Slope, ---	Gaseous,	Fan, -----	15	4.2	4.6	65	.7			4	46,450	46,450		
Water Level Tunnel, -----	Drift, ---	Non-gas.,	Fan, -----	12	4	3.6	60	.5			2	27,000	27,000		
Mill Creek Coal Co.															
Buck Mountain Colliery, -----	Slope, --	Gaseous,	Fans, ---	16	4	4	80	1.1			8	111,401	112,860		237
Vulcan Colliery, -----	Slope, ---	Gaseous,	{ Fan, -----	16	4	4	80	.7			14	128,000	132,720		245
Middle Lehigh Colliery, -----	Slope, ---	Gaseous,	{ Fan, -----	16	4	4	58	.8	Guibal, --	Steam, ---	5	72,000	82,400		120
			{ Fan, -----	16	4.5	4.1	60	.5							

TABLE 1.—Operators, location of collieries, railroads, etc.

Names of Operators and Collieries	County	Name of General Superintendent	Post Office	Name of Superintendent	Post Office	Railroad to Mine
Lehigh and Wilkes-Barre Coal Co. Audenried No. 4, Honey Brook No. 5,	Schuylkill,	O. F. Huber,	Wilkes-Barre,	E. J. Newbaker,	Audenried,	C. R. R. of N. J.
Mill Creek Coal Co. Buck Mountain, Vulcan, Middle Lehigh,	Schuylkill,	T. D. Jones,	New Boston,	J. E. Jones,	New Boston,	Lehigh Valley
Philadelphia and Reading Coal and Iron Co. Silver Creek, Eagle Hill, Eagle Hill No. 2,	Schuylkill,	W. J. Richards,	Pottsville,	Reese Tasker,	Pottsville,	P. and R.
Coxe Brothers and Co., Inc. Oncoida,	Schuylkill,	S. D. Warriner,	Wilkes-Barre,	Wm. H. Davis,	Hazleton,	Lehigh Valley
Morea, Dodson Coal Co.	Schuylkill,	T. M. Dodson,	Morea,	T. M. Dodson,	Morea,	Lehigh Valley and Penna.
Truman M. Dodson Coal Co. Kaska William,	Schuylkill,	T. M. Dodson,	Morea,	Thomas F. Downing,	Kaska,	P. and R. and C. R. R. of N. J.
Maryd Coal Co.	Schuylkill,	T. E. Snyder,	Maryd,	George Jeffryes,	Maryd,	P. and R. and C. R. R. of N. J.
East Lehigh Coal Co. East Lehigh,	Schuylkill,	James Tinley,	Tamaqua,			C. R. R. of N. J.
Phillips Coal Co.* Silver Hill,	Schuylkill,	D. E. Phillips,	Middleport,	D. E. Phillips,	Middleport,	P. and R.
Big Creek Coal Co. Moss Glenn,	Schuylkill,			F. H. Johns,	Brookton,	P. and R.

*Formerly Phillips Brothers.

Port Carbon Coal Co. Lucy C. R., -----	Schuykill, -----	D. J. Slattery, ---	Tuscarora, -----	D. J. Slattery, ---	Tuscarora, -----	P. and R.
Gorman and Camplou Bell, -----	Schuykill, -----	D. J. Slattery, ---	Tuscarora, -----	D. J. Slattery, ---	Tuscarora, -----	P. and R.
William Cook Oakley, -----	Schuykill, -----	William Cook, ----	Tuscarora, -----	William Cook, ----	Tuscarora, -----	P. and R.

TABLE 2.—Number of tons of coal mined, number of days worked, number of persons employed, number killed and injured, quantity of powder and dynamite used, etc.

Names of Operators and Colleries	County	Number of tons of coal shipped to market	Number of tons used at colleries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Number of kegs of powder used	Number of pounds of dynamite used	Number of horses and mules
Lehigh and Wilkes-Barre Coal Co. Audenried No. 4, Honey Brook No. 5,	Schuylkill, -----	315,217	53,160	3,428	371,805	218	830	4	5	7,177	169,413	79
		268,945	26,140		295,085	230	768	2	7	3,627	159,009	54
Totals,		584,162	79,300	3,428	666,890		1,688	6	12	10,804	319,422	133
Mill Creek Coal Co. Buck Mountain, Vulcan, Middle Lehigh,	Schuylkill, -----	235,925	28,164		264,089	234	401	4	7	7,467	15,350	43
		217,010	22,900		239,240	227	411			6,744	13,125	40
		140,190	16,927		157,117	225	284	5	6	2,703	19,775	27
		593,155	67,291		660,446		1,096	9	23	16,914	48,250	116
Totals,		584,162	79,300	3,428	666,890		1,688	6	12	10,804	319,422	133
Philadelphia and Reading Coal and Iron Co. Silver Creek, Eagle Hill Eagle Hill No. 2,	Schuylkill, -----	252,168	32,125	4,201	288,494	238	1,024	4	2	4,705	63,474	85
		203,195	27,901	1,888	232,984	235	673	2	8	1,422	52,899	65
			3,491		3,491		61			568	11,424	
		455,363	63,517	6,089	524,969		1,758	6	10	6,695	127,797	150
Totals,		455,363	63,517	6,089	524,969		1,758	6	10	6,695	127,797	150
Oneida, ----- Coxe Brothers and Co., Inc.	Schuylkill, -----	215,248	67,962	2,467	285,677	231	661	3	10	4,332	56,211	68

†Included with Eagle Hill.

*Miscellaneous.

Morea, -----	Dodson Coal Co.	Schuykill, -----	175,000	20,000	750	195,750	262	518	2	4	1,775	34,425	46
Kaska William, -----	Truman M. Dodson Coal Co.	Schuykill, -----	114,659	36,600	240	151,499	216	333	2	7	1,625	29,850	37
Maryd, -----	Maryd Coal Co.	Schuykill, -----	83,440	12,972	711	97,123	144	414	---	6	1,939	33,093	43
East Lehigh, -----	East Lehigh Coal Co.	Schuykill, -----	43,873	6,000	12,035	61,908	286	90	1	---	5	8,775	16
Silver Hill, -----	Phillips Coal Co.	Schuykill, -----	38,311	2,807	422	41,540	246	87	1	---	240	2,400	9
Moss Glenn, -----	Big Creek Coal Co.	Schuykill, -----	38,900	2,046	452	41,488	260	112	---	2	605	950	2
Lucy C. R., -----	Port Carbon Coal Co.	Schuykill, -----	24,637	1,031	1,302	27,020	234	88	---	2	50	1,200	6
Bell, -----	Gorman and Campion	Schuykill, -----	16,733	1,200	---	17,933	195	66	---	---	250	4,000	12
Oakley, -----	William Cook	Schuykill, -----	2,073	335	668	3,076	134	14	1	---	100	900	4
Grand totals, -----			2,385,694	361,111	28,564	2,775,369	---	6,985	31	76	45,334	667,203	636

TABLE 2.—Part 2

Names of Operators	County	Number of Boilers				Locomotives			Number of steam engines of all classes	Total horse power	Number of pumps delivering water to surface	Capacity in gallons per minute	Quantity delivered to surface per minute—gallons	Number of electric dynamos	Number of air compressors	
		Cylindrical	Horse power	Tubular	Horse power	Total horse power	Steam	Air								Electric
Lehigh and Wilkes-Barre Coal Co., ----	Schuylkill,	39	1,850	45	4,780	6,130	8	1	46	6,175	10	16,083	7,145	2	2	
Mill Creek Coal Co., ----		52	2,960	25	4,000	6,960	9	3	46	4,665	13	15,400	3,500	---	2	
Philadelphia and Reading Coal and Iron Co., ----		20	600	22	3,365	3,965	2	1	44	7,137	4	2,600	1,477	1	3	
Coxe Brothers and Co., Inc., ----		21	735	25	3,200	3,935	4	2	36	3,650	9	7,600	4,600	1	4	
Dodson Coal Co., ----		---	---	19	2,350	2,350	---	---	13	910	5	6,853	6,853	1	---	
Truman M. Dodson Coal Co., ----		---	---	16	2,240	2,240	1	---	14	980	2	2,350	1,500	---	2	
Maryd Coal Co., ----		---	---	10	1,600	1,600	2	---	21	2,140	3	1,600	900	---	1	
East Lehigh Coal Co., ----		---	---	3	650	650	2	---	17	400	1	300	50	---	1	
Phillips Coal Co., ----		---	---	4	250	250	2	---	4	75	---	---	---	---	---	
Big Creek Coal Co., ----		---	---	5	380	380	2	---	7	180	2	700	280	---	---	
Port Carbon Coal Co., ----		---	---	2	130	130	---	---	3	130	---	---	---	1	---	
Gorman and Camplon, ----		---	---	2	175	175	---	---	6	125	---	---	---	---	---	
William Cook, ----		---	---	2	120	120	1	---	3	176	---	---	---	---	---	
Totals, ----		---	132	5,645	180	23,260	28,905	31	6	260	26,763	49	53,466	26,275	6	16

TABLE 3.—Number of each class of employes inside and outside of mines

Names of Operators and Collieries	County	Inside										Outside										
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Doorbys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Foremen	Blacksmiths and carpenters	Engineers and firemen	State pickers (boys)	Statepickers (men)	Bookkeepers and clerks	All other employes	Total outside	Grand total inside and outside
Lehigh and Wilkes-Barre Coal Co. Audenried No. 4, Honey Brook No. 5,	Schuylkill,	2	3	219	130	29	14	9	130	88	624	1	1	5	39	60	8	2	96	206	830	
		1	2	132	128	23	12	3	121	133	556	5	3	32	31	73	7	2	88	207	763	
		3	2	351	258	52	26	12	251	221	1,180	3	7	37	71	133	15	4	238	508	1,688	
Totals,																						
Mill Creek Coal Co. Buck Mountain, Vulcan, Middle Lehigh,	Schuylkill,	1	1	121	71	26	1	2	19	14	259	1	1	9	29	19	41	3	40	142	401	
		1	1	131	51	21	10	2	17	12	274	1	1	7	27	25	31	2	43	137	411	
		1	1	69	34	14	3	4	11	20	167	1	1	7	25	12	7	2	73	127	284	
Totals,																						
Philadelphia and Reading Coal and Iron Co. Silver Creek, Eagle Hill, Eagle Hill No. 2,	Schuylkill,	3	2	344	156	61	14	8	47	46	690	1	3	23	81	56	79	7	156	406	1,096	
		1	10	256	105	45	4		136	184	742	2	2	13	22	48	24	6	167	282	1,024	
		1	7	120	92	16	4	4	94	92	430	2	11	21	21	85	15	4	155	243	673	
Totals,																						
		2	18	385	213	63	8	4	236	285	1,214	5	26	48	88	39	10	383	544	1,768		

* Miscellaneous.

Table 3.—Continued

Name of Operators and Collieries	County	Inside										Outside							Grand totals inside and outside			
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Doorboys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Foremen	Blacksmiths and carpenters	Engineers and firemen	State pickers (boys)	State pickers (men)		Bookkeepers and clerks	All other employes	Total outside
Coxe Brothers and Co., Inc. Onelda, -----	Schuylkill, -----	1	4	---	244	27	36	1 ⁹	5	16	64	412	---	1	17	47	22	23	4	135	249	661
Dodson Coal Co. Morea, -----	Schuylkill, -----	1	---	3	94	77	25	3	6	79	---	288	2	1	20	26	29	19	3	130	230	518
Truman M. Dodson Coal Co. Kaska William, -----	Schuylkill, -----	1	---	5	88	38	28	---	6	32	14	212	---	1	11	25	32	16	2	94	181	393
Maryd Coal Co. Maryd, -----	Schuylkill, -----	1	---	2	121	50	21	1	3	33	40	272	1	3	7	26	20	5	4	76	142	414
East Lehigh Coal Co. East Lehigh, -----	Schuylkill, -----	1	---	---	16	5	4	---	1	6	---	38	1	1	3	5	8	---	1	38	57	90
Phillips Coal Co. Silver Hill, -----	Schuylkill, -----	1	---	---	17	5	3	2	---	4	10	42	1	1	3	4	8	3	1	24	45	87
Big Creek Coal Co. Moss Glenn, -----	Schuylkill, -----	1	---	---	40	---	---	---	2	---	---	45	1	2	4	7	7	---	1	45	67	112
Port Carbon Coal Co. Lacey C. R., -----	Schuylkill, -----	1	---	---	36	9	6	1	---	4	2	59	1	1	2	3	5	---	1	16	29	88

TABLE 3.—Part 2

Names of Operators and Collieries	County	Number of Days Worked in Breaker												Total
		January	February	March	April	May	June	July	August	September	October	November	December	
Lehigh and Wilkes-Barre Coal Co. Andenried No. 4, Honey Brook No. 5,	Schuylkill,	23	20	14	21	23	17	13	13	9	19	23	23	218
		25	20	14	23	25	17	12	12	19	15	24	24	230
Buck Mountain, Vulcan, Middle Lehigh,	Schuylkill,	22	21	22	20	20	20	20	18	16	19	18	18	234
		21	19	19	18	19	21	21	20	12	19	19	19	227
		23	18	19	20	20	21	20	18	10	19	18	19	225
Philadelphia and Reading Coal and Iron Co. Silver Creek, Eagle Hill,	Schuylkill,	22	17	23	24	24	16	13	14	19	20	23	23	238
		22	16	23	24	24	17	8	14	18	22	23	24	235
Oneida,	Schuylkill,	25	18	11	25	24	26	12	13	17	19	20	21	231
Morea, Dodson Coal Co.	Schuylkill,	24	20	23	23	22	25	24	18	23	22	21	22	262
Kaska William, Truman M. Dodson Coal Co.	Schuylkill,	17	17	23	21	22	23	19	17	7	13	19	18	216
Maryd, Maryd Coal Co.	Schuylkill,	26	22	24	21	21	23	7						144
East Lehigh, East Lehigh Coal Co.	Schuylkill,	26	20	25	21	25	25	26	23	24	25	22	24	286
Silver Hill, Phillips Coal Co.	Schuylkill,	23	20	20	13	17	20	23	23	23	21	20	20	246

TABLE 4.—Fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Mine	County	Nature and Cause of Accident in Brief
Jan. 2	John Koniscoski, ----	Polish, ----	Miner, -----	46	M.	1	2	Middle Lehigh, ----		Killed by an explosion of dynamite in East Middle split gangway, No. 1 tunnel. He was sitting on his supply box near the face of the gangway thawing a stick of dynamite over the flame of his lamp, which was on the lid of the box, when the dynamite exploded, together with all the supplies the box contained.
28	Onfry Hodowanis, ----	Russian, ----	Laboret, -----	40	M.	1	4	Buck Mountain, ----		Killed by fall of top slate at face of No. 9 breast, No. 5 East Skidmore vein. He was trying to bar the slate down and had to leave it to go into the next breast while his partner was firing a blast and when he returned the slate fell on him.
30	Domnic Tanrella, ----	Italian, ----	Laboret, -----	54	M.	1		Honey Brook No. 5, ----	Schuylkill, ----	Fatally injured in Green Mountain strip-pings. A piece of frozen clay rolled down the face of stripping, struck him and knocked him down on the track and broke both legs. Died in the State Hospital at Hazleton, February 1, 1904.
Feb. 12	John Ignot, -----	Hungarian.	Patcher, -----	16	S.			Audenriek No. 4, ----		Killed by being struck by a loaded mine car at the bottom of No. 4 slope. He was standing on the loaded track while a car was being hoisted up the slope. When the car was up 150 feet the hitching plate broke and the car ran back to the bottom. The bottom-man called to him to run to the safety hole, about six feet away, but he became excited and ran up the slope to get on the higher or empty track and was struck by the car as he reached it.

Fatally injured at face of No. 3 breast in Number 12 stop, was miner failed to come to work that morning and Miss Kosky undertook to do the work. He drilled a hole in the face of the breast and charged it. He was found by the fire boss between 8 and 9 o'clock, A. M., 15 feet back from the face of the breast, unconscious. He had been struck about the head by coal from the blast. Died the same day.

Killed by falling down the tender shaft, a distance of 150 feet. He was employed on No. 4 plane and was going out of the mine. After coming down No. 4 plane to the 3rd level he had to travel by a manway on the top split vein in 3rd level, 125 feet to where the tender shaft intersected the vein. The landing at this point is guarded by an iron gate and is also lighted by a lamp. It is supposed that he opened the gate, thinking the cage was standing there, and walked into the shaft.

Fatally injured by an explosion of gas in Breast No. 120, West Top split vein. Silcox was robbing pillars and was supposed to work with safety lamp. He went on top of the old gob and rocks and stripped his safety lamp and ignited the gas. Died the same day. Wade was Silcox's partner and at the time of the explosion was down from the face of the pillar in the chute repairing it. Died February 27.

Killed by cars. He was standing under a scraper line alongside the railroad track where the loaded cars come out from under the breaker, with his back turned towards the breaker and was signaling to his men who were down the track cleaning it, to come up to do some work under the breaker. The car loader was running out two loaded gondola cars and the noise of the breaker and the scraper line prevented McFadden from hearing them coming. He was struck by the cars and dragged a distance of 30 feet. Outside.

Month	No.	Name	Occupation	Age	Marital Status	Nationality	Place of Birth
Feb.	13	John Misskosky	Laborer	34	M.		Loney Brook No. 5,
	17	John Balsavage	Loader	32	M.		Silver Creek
	17	John Silcox	Miner	40	M.		Eagle Hill,
	17	John Wade	Miner	37	M.		
	27	John McFadden	Gang-boss	57	S.		Audenried No. 4,

Schuykill, ---

TABLE A.—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Mine	County	Nature and Cause of Accident in Brief
Mar.	John Horitzko, -----	Hungarian,	Doortender,	19	S.	-----	-----	Oneida, -----		Fatally injured at Oneida No. 3 shaft by cars. He was employed as a doortender on No. 8 West Buck Mountain gangway. The runner who takes the cars down the slant told him to go and open the door. Horitzko started down the slant but stopped to talk to some men and when he heard the trip coming he ran to open the door but he was too late. He was caught and thrown under the car and dragged for a distance of 30 feet. Died March 6, at Hazleton State Hospital.
?	John Inkoski, -----	American,---	Laborer,	20	S.	-----	-----	Oneida, -----	Schuylkill, ---	Instantly killed at No. 4 slope by fall of slate. They were making a turnout on No. 1 East Buck Mountain gangway and were taking the coal off the high side of the gangway, to make room for the turnout, before blasting the slate. In doing this it was necessary to fore-pole across the chutes as they came to them. In crossing No. 207 chute the slate was bad in the top. They put a prop under it and were driving their fore-poles behind it to hold back the gob in the chute. As the weight came on the prop it disturbed it and the slate fell. Inkoski was under the fore-poles making room for more poles and when the slate fell the poles separated and caught him across the neck.

Mar. 20	Thomas Tomasavitch, Austrian, ---	Laborer, -----	20	S. -----	Buck Mountain, ----	<p>Killed by fall of slate in No. 4 East bottom split gangway. A piece of top slate had been left hanging back for 9 feet from face of gangway and it fell on him while he was drilling a hole. Fatally injured by mine cars on West Buck Mountain gangway, No. 1 level. He was employed as door-tender on the gangway between No. 1 and No. 3 slope. A short distance east of the door the gangway makes a sharp curve, which prevented him from seeing the driver coming with empty trip of cars. He was within a short distance of the door when he saw the driver coming around the curve with his trip. He ran to open the door but the pressure of the air on the door was great and he only had it partly open when the cars struck it and crushed his body against the frame of the door. Instantly killed by fall of slate in No. 45 breast, East Seven Foot. He was drilling a hole on the west rib of his breast. He noticed a piece of clod or slate adhering to the top rock and commenced to work in order to get out of the way of it, as he thought. While crossing the breast the clod fell on him. The piece of slate was 5 inches thick and 6 feet square.</p>
May 5	Joseph Handlos, -----	Doortender, - 71	M. 1	M. 1	Middle Lehigh, -----	
June 3	Martin Laukites, -----	Miner, -----	36	M. 1	Middle Lehigh, -----	<p>Fatally injured by fall of top coal in No. 2 chute, No. 4 inside slope. Died June 13. He was loading a car from the chute and as the vein was flat he was only six feet from the gangway timber. The piece of coal that struck him broke the pelvic bone. Instantly killed by fall of slate at No. 3 and No. 5 slope. He was shoveling coal at the face of No. 46 breast, No. 9 West Buck Mountain gangway. He left the clod or slate hang up for a distance of ten feet. The fire boss had told him to take it down but he claimed it was safe enough to work under. It fell on him thirty minutes after he commenced to work in the morning.</p>
9	John Sowka, -----	Miner, -----	25	M. 1	Morea, -----	
12	George Marsten, -----	Miner, -----	34	M. 1	Onelda, -----	

Schuylkill, --

TABLE 4.—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Mine	County	Nature and Cause of Accident in Brief
July	Peter Harishin, -----	Polish, ----	Laborer, -----	22	S.	-----	-----	Audersried No. 4, ---		Instantly killed by fall of slate in No. 2 East Buck Mountain vein, No. 1 basin, No. 4 level. After firing a shot he and his miner went in the heading. The miner started to dress down the loose coal and told Harishin to stay in the heading until he called him. But Harishin started up after the miner and while the miner was in the act of dressing down the slate the laborer walked in under it and a piece fell on him.
8	John Brusco, -----	Hungarian, -----	Driver, -----	39	M.	1	7	Morea, -----	Schuylkill, ---	Fatally injured by cars on West Buck Mountain gangway, No. 1 level. Died the same day. He was taking a trip of empty cars into the mine. He got off the front of the trip to speed up the mules and in getting on again he turned his back toward the direction he was going in order to shield himself from the strong current of air that he was running against. He had forgotten about an old chute on the low side of the gangway that he was approaching and when he reached it his body was caught between the chute and the car.
Aug. 1	Antonle Costello, -----	Italian, ----	Miner, -----	24	S.	-----	-----	East Lehigh, -----		Fatally injured by cars. Died the same day. They had finished sinking a new slope on the B vein, which has a dip of 75 to 80 degrees. Costello was starting a tunnel at the bottom of the slope. They were using a small iron buggy for hoisting the rock. Costello had loaded a car and was having it hoisted

and when the car was up 200 feet the rope broke and the car descended the slope. When it struck the bottom it turned over on Costello.

Fatally injured. He was pulling an empty car up the turnout at the bottom of No. 1 shaft with a single mule and in turning the mule to come back he struck it. The mule kicked out and struck him in the lower part of the abdomen. He died the next morning.

Fatally injured by mine cars in No. 4 drift. When he came to the mouth of the drift on his last trip in the evening he was in a hurry and went to cut off a rock dumper that was coupled to and behind a mine car. He slipped and fell alongside the track. The tread of the wheel caught the flesh on his leg and stripped it off to the bone from the hip down. Died September 25.

Fatally injured by fall of coal. Died the next morning. He had driven a breast up to the old gangway in the East Buck Mountain vein, South tunnel, from the face of the breast and drove a small hole out of the old gangway. While he was standing on the grab spiking out some blanks on the inglers the whole face of coal fell and buried him. It required ten hours to release him.

Fatally injured by mine cars. He was riding in the cab of No. 6 locomotive going west toward Honey Brook No. 5 on a single track. There was a dense fog, which prevented the engineer from seeing any distance. No. 7 locomotive was coming east from Honey Brook colliery with a trip of empty cars and when opposite No. 1 stripping the engines collided. Schofield was thrown from the cab to the south side of the track and his ankle bone was dislocated. His injuries were not considered serious but after being taken to the State Hospital at Hazleton other complications set in and he died two days afterward. Outside.

Aug. 12	Harvey Jones, -----	American,---	Driver, -----	21	S. -----	Kaska William, -----	
Sept. 22	Daniel Wood, -----	American,---	Driver, -----	45	S. -----	Silver Creek, -----	
22	John Boochinski, -----	Lithuanian, ---	Miner, -----	45	M. 1	Silver Hill, -----	Schuylkill, -----
Oct. 1	William Schofield, ----	American,---	Carpenter, ----	50	M. 1	Audenried No. 4, --	

TABLE 4.—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Mine	County	Nature and Cause of Accident in Brief
Oct. 5	Anthony Goodana- vitch.	Lithuanian.	Miner,	46	S	-----	-----	Middle Lehigh, -----		Instantly killed by fall of slate. He had charge of the work driving the East Middle split vein, Dick Switch gangway. The vein was 2 feet 6 inches thick. The roof necessary for the gangway was blasted out of the bottom slate. He was drilling a hole on low side of gangway for the leg of the set of timbers when a piece of slate 6 feet x 3 feet x 6 inches thick fell on him from the top.
12	Martin Ewash,	Polish, -----	Miner,	40	S.	-----	-----	Oakley, -----	Schuylkill, -----	Instantly killed by fall of coal. He was driving a small gangway in the West Bottom split vein and had put in a set of timber close to the face of his work. Over his last set of timber there was a vacancy, owing to the trial hole's crossing the gangway. He had been told to put blocking over the timber to prevent the coal from running and a ear of blocks had been furnished for that purpose, but he told the driver he did not want them. The driver left him sitting on the high side of the gangway between the last two sets of timber and when he returned he found there had been a fall of dirt and shelly coal, under which Ewash was buried.
21	William Smith, -----	Lithuanian,	Laborer,	30	M.	1	1	Silver Creek, -----		Instantly killed by fall of slate in East Holmes vein gangway, No. 3 plane. The vein is 2 feet 4 inches of coal and over the coal is a slate 3 feet thick and over the slate there is shelly coal 10 inches thick. The miner cut in under the slate for a distance of 9 feet. He

had drilled over the slate to blast it down and was back on the gangway preparing the powder, and Smith was in under the slate shoveling out some coal when it fell suddenly. There was a slip in a distance of 4 feet from the edge, running diagonally from northwest to southeast and the slate parted from this slip when it fell.

Fatally injured by explosion of gas in No. 5 breast, No. 8 level, West Buck Mountain vein. The fire boss met him in the morning and told him not to go up in his breast until he (the fire boss) returned as he had found gas in it. The fire boss went to No. 7 level to attend to some other duties and Dominisky went up in his breast with a naked lamp and ignited the gas. He died from his burns at Ashland State Hospital, November 17.

Fatally injured by explosion of powder in No. 53 breast, East Bottom split, No. 3 plane. Died the same day. He was making a cartridge of powder to fire a blast in the face of his breast. The heading he was sitting in was seventy feet away from the face. It is supposed that he had a naked lamp on his head while handling the powder and that a spark from the lamp fell into the powder and caused the explosion of the full keg.

Fatally injured by mine cars in West B stripping. Died November 11. The locomotive left two empty cars standing on a grade of 2 degrees to be run into the stripping when needed. The first car had sprags in the wheels to hold them. Kero uncoupled the first car and removed the sprags. When the car moved down the grade Kero jumped on the rear end to ride down to where it was to be loaded. He neglected to put sprags in the car that he had left standing on the grade and when he was about one hundred feet from the starting point it started after the first car and bumped into it, breaking Kero's skull and otherwise injuring him.

Nov. 6	Joseph Dominisky, --- Lithuanian, --- Miner, --- 30 S. ---	Buck Mountain, ---
6	Joseph Sobitisky, --- Polish, --- Miner, --- 50 S. ---	Buck Mountain, ---
10	Anthony Kero, --- Polish, --- Laborer, --- 85 M. 1 ---	Middle Lebigh, ---

Schuykill, ---

TABLE 4.—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Mine	County	Nature and Cause of Accident in Brief
Nov. 30	Mike Melochick, -----	Hungarian,	Dump-man, --	39	M.	1	----	Silver Creek, -----		Instantly killed by cars. He was employed as dumper-man on the end of the rock bank outside. There were three empty dumpers standing on the turnout at the end of the bank and the locomotive pushed in behind them to run them to the breaker. Melochick was standing on the track to couple the engine and dumpers. It appears that he missed the coupling the first time and the engineer pulled back his engine and in coming up the second time Melochick's head was caught between the boiler head of the engine and the front of the rock dumper. Outside.
Dec. 8	Mike Peyonos, -----	Lithuanian,	Laborer, -----	25	S.	----	----	Kaska Willam, -----	Schuylkill.	Instantly killed. He was laboring for parties robbing pillars in the West Bottom split, Skidmore tunnel, No. 1 slope. The pillar and old gob had struck up the pitch a distance of sixty feet, on a pitch of 40 degrees. He had drawn all the loose coal out, leaving nothing behind the bottom to protect it. He had finished the last car and was going down to the gangway when the gob and old pillars rushed and knocked the battery out on top of him. The timber of the battery caught him against a 1 F. P. in the chute.

TABLE 5.—Non-fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Mine	County	Nature and Cause of Accident in Brief
Jan. 2	Thomas Nagy, -----	Polish, ---	Miner, -----	43	M	Middle Lehigh, -----		Face and hands burned by explosion of dynamite at face of East Middle split gangway, No. 1 level. His partner threw the dynamite over flame of his lamp.
3	John Reilly, -----	American,--	Carpenter,-----	25	S.	Morea, -----		Head and hips bruised by falling from head frame of shaft while repairing it. Outside.
20	Peter Kolonofsky, ---	Lithuanian,	Miner, -----	27	S.	Vulcan, -----		Hand torn off by an explosion of dynamite caps. He was carrying the caps in the hand in which he carried his lamp and the strong current of air carried a spark from lamp into caps and caused the explosion.
29	Mike Pavolick, -----	Russian,---	Jigrunner,-----	15	S.	Honey Brook No. 5,-----	Schuylkill,--	Thumb and fingers crushed. Caught in friction wheel of jigs. Outside.
30	Henry Shalls, -----	American,--	Driver-boss,-----	34	M.	Honey Brook No. 5,-----		Collar bone fractured. Bruised between mine cars.
Feb. 5	George Combley, -----	American,--	Driver-boss,-----	40	M.	Buck Mountain,-----		Compound fracture of right leg. Caught by loose rail that he was taking down the slope in a car from the 6th to 7th level on No. 3 slope.
5	Michael Herrick, -----	Slavonian,	Hitcher,-----	36	M.	Maryd, -----		Squeezed about the abdomen. Caught between mine cars at the bottom of No. 2 plane while uncoupling them when in motion. Outside.
5	Frank Tevade, -----	Hungarian,	Laborer,-----	46	M.	Oneida, ^a -----		Shoulder dislocated. Had his arm around a telegraph pole in coal pocket to sustain himself while starting the coal. When the coal rushed it swung him around and dislocated his arm. Outside.

TABLE 5.—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Mine	County	Nature and Cause of Accident in brief
Feb. 10	Joseph Hoboskey, ---	Polish, ---	Laborer, ---	25	M.	Vulcan, ---		Hand cut. While shoveling coal at face of breast a piece of slate fell from top and struck him.
12	John Kasavage, ---	Lithuanian, ---	Miner, ---	45	M.	Vulcan, ---		Body squeezed. While riding on the front of a loaded trip of mine cars coming out the gangway he was caught between chute and mine cars.
14	Frank Kuss, ---	Russian, ---	Miner, ---	27	M.	Eagle Hill, ---		Leg broken. While cutting out a set of old timber on the gangway it fell on him.
16	John Numeriek, ---	Polish, ---	Mason, ---	39	M.	Oneida, ---		Face and hands scalded by steam. Numeriek was removing the ashes from the boiler house when one of the boilers exploded. Hoffman was in the boiler house at the time. Outside.
16	John Hoffman, ---	American, ---	Fireman, ---	41	M.	Oneida, ---	Schuylkill,	Ribs broken and face cut. He was working at face of breast when a piece of top slate fell on him.
20	Joseph Ornian, ---	Lithuanian, ---	Miner, ---	45	S.	Maryd, ---		Leg injured by fall of coal at face of gangway.
27	John Beatty, ---	Hungarian, ---	Miner, ---		S.	Moss Glenn, ---		Ribs fractured. Struck by mine car on No. 1 plane while shoveling coal on same. Outside.
27	John Gudos, ---	Slavonian, ---	Laborer, ---	42	M.	Maryd, ---		Hands and face burned by an explosion of gas. He struck a match to light his safety lamp at face of No. 5 breast, West Dutton split vein.
27	John Barhinsky, ---	Polish, ---	Miner, ---	35	M.	Eagle Hill, ---		Concussion of the brain. Fell down the coal chute, a distance of 15 feet, striking on his head. Outside.
March 2	Edward Gallagher, ---	American, ---	Slatepicker, ---	15	S.	Audenried No. 4, ---		

Mar. 2	Steven Demshock, ----	Slavonian, ----	Dumpman, ----	45	M.	Maryd, ----		Ribs broken. In pushing mine car over apex of plane the engineer pulled it back suddenly and pulled the ear on top of him. Outside.
2	John M. Lonun, ----	Hungarian, ----	Miner, ----	35	M.	Kaska William, ----		Leg broken. While working at face of West South Dip Orchard counter gang-way a piece of slate fell on him.
2	Alex Kinkus, ----	Lithuanian, ----	Miner, ----	42	M.	Buck Mountain, ----		Hands and face cut. He loaded and then lighted the fuse in two holes in face of breast. One of the blasts exploded. He returned to see why the other hole did not explode and when he reached the face of breast it exploded.
12	Angelo Bolla, ----	Italian, ----	Laborer, ----	45	M.	Honey Brook No. 5, ----		Ankle fractured. A piece of rock rolled down face of strippings and struck him. Outside.
14	Jacob Shaptuck, ----	Russian, ----	Miner, ----	32	S.	Buck Mountain, ----		Hands and face burned by explosion of black powder. He was filling a cartridge with his head and a spark fell from his lamp into the cartridge.
14	Michael Moor, ----	Italian, ----	Footman, ----	27	M.	Audenried No. 4, ----		Leg fractured. Struck by the swing of wire rope at bottom of No. 4 slope.
20	Eben Pergrain, ----	Welsh, ----	Miner, ----	45	---	Vulcan, ----		Leg fractured. He was sitting at bottom of slope waiting to be hoisted to the surface when a piece of coal rolled down the slope and struck him.
April 11	Robert Norlks, ----	Lithuanian, ----	Miner, ----	37	M.	Kaska William, ----		Hands and face burned by gas. Norlks went into his breast while the top coal was working. The coal fell and brought the gas down on his naked lamp.
11	Frank Yorlkes, ----	Lithuanian, ----	Miner, ----	25	---			Yorlkes was working with Norlks. Hands and face burned by explosion of West Buck Mountain vein, with a naked lamp on his head and ignited the gas.
13	Peter Fedranko, ----	Hungarian, ----	Miner, ----	38	M.	Oneida, ----		Face cut and eye injured. He lighted the fuse in a hole he had charged in face of breast. He did not give it sufficient time to explode and returned to the face of breast and was examining the hole when the blast went off.
24	Robert Glendo, ----	Polish, ----	Miner, ----	35	M.	Eagle Hill, ----		Head sauced. Caught between mine car and timber on No. 3 slope while riding down the slope.
30	Stephen Gembls, ----	Polish, ----	Laborer, ----	26	S.	Middle Lehigh, ----		Leg broken. A piece of coal fell on him at face of Breast 134, West Top split.
May 1	Peter McDonald, ----	American, ----	Miner, ----	35	M.	Engle Hill, ----		

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TABLE 5.—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Mine	County	Nature and Cause of Accident in Brief
May 2	George Hydrock, -----	Russian, ---	Patcher, -----	20	S.	Buck Mountain, -----		Arm broken. He was riding on the front of an empty trip of cars pushed by a locomotive in the gangway. The first car jumped the track and knocked out three sets of timber. Hips squeezed. Caught between post under breaker and door of box car. Outer side.
6	Richard vanBargan, -----	American, --	Loader-boss, -----	21	S.	Wards, -----		Foot crushed. Caught between bumpers of loaded mine cars on turnout at bottom of slope.
8	John Connors, -----	American, --	Driver, -----	19	S.	Vulcan, -----		Arm broken, shoulder bruised and arm cut. In opening a heading in pillar of No. 81 breast, East Holmes vein, Princeton slope, a piece of top coal fell on him.
18	Mike Urbin, -----	Polish, ---	Miner, -----	30	S.	Eagle Hill, -----	Schuylkill, ---	Ribs broken and back hurt. A piece of top coal fell on him in Breast No. 22, Diamond vein drift.
14	William Bellulis, -----	Polish, ---	Miner, -----	42	M.	Eagle Hill, -----		Nose broken and face cut. Fell and struck himself against a piece of sheet iron in getting away from a rope that had broken. Outside.
15	Charles Hulett, -----	English, ---	Slatepicker, -----	14	S.	Eagle Hill, -----		Collar bone broken. Caught between timber on high side of gangway and mine car.
25	Joseph Stachs, -----	Slavonian, --	Laborer, -----	22	S.	Mary, -----		Foot amputated. In pushing coal away from the jig disk caught his foot and crushed it. The foot had to be amputated above the ankle. Outside.
25	John Kondosh, -----	Hungarian, --	Slatepicker, -----	15	S.	Audenried No. 4, -----		

Month	Day	Name	Nationality	Occupation	Age	Sex	Location	Incident
May	25	Daniel Purcell	Irish	Swifelman	22	S.	Eagle Hill	Body bruised. Struck by a locomotive outside.
June	4	Fred Bradbury	American	Miner	29	M.	Moss Glenn	Leg broken. A piece of top coal fell on him at face of No. 5 breast, Mammoth vein.
	4	Mike Rematze	Polish	Miner	36	M.	Honey Brook No. 5	Arm fractured. A piece of coal from blast struck him. West Lykens vein, No. 5 shaft.
	9	James Coll	American	Driver	26	S.	Juck Mountain	Head severely cut. Hand caught between a piece of coal on top of car and collar in gangway, while car was in motion.
	12	Joseph Malinget	Hungarian	Miner	34	S.	Oneida	Body and arm bruised. He was barring down a piece of coal in Breast 158, East Buck Mountain vein, when it fell on him.
	15	John Lukatch	American	Slatepicker	19	S.	Oneida	Hand cut. Caught between chain and sprocket wheel of jigs. Outside.
	19	Albert August	Slavonian	Miner	36	M.	Oneida	Index finger of right hand cut off. A piece of coal rolled down the breast and caught his hand against the timber.
July	7	Stiney Greboh	Polish	Miner	24	M.	Vulcan	Leg broken. A piece of slate fell on him at face of Breast 32, No. 5 West Skidmore vein.
	8	Michael Lotuck	Hungarian	Driver	23	M.	Morea	Leg broken. A piece of coal fell from high side of gangway and struck him.
	10	Edwin Thomas	American	Starter	25	S.	Kaska William	Hand shot off. In trying to pull the fuse out of a cap inserted in a stick of dynamite in a battery it exploded.
	16	Paul Orinehen	Polish	Driver	19	S.	Middle Leligh	Body squeezed. Caught between mine car and timber at bottom of No. 3 slope.
	16	Joseph Gemeavich	Hungarian	Laborer	34	S.	Honey Brook No. 5	Skull fractured. A piece of slate fell on him at face of West Wharton vein gangway. Water Level tunnel.
	27	Stephcn Keachko	Slavonian	Laborer	20	S.	Maryd	Leg broken. A piece of machinery that he was helping to carry slipped and fell on him. Outside.
Aug.	1	Lewis Bressi	Polish	Miner	28	M.	Audenried No. 4	Both eyes destroyed by blast. He was drawing out a charge of dynamite that he thought had missed fire, when it exploded.
	3	Stanley Topovitch	Polish	Miner	56	M.	Honey Brook No. 5	Ribs fractured. Returned to examine a hole that he thought had missed fire and when he got to face of breast and was in the act of drawing the charge it exploded.
	3	Charles Klina	Polish	Laborer	25	S.		Head and face severely cut. He was laboring for Topovitch.

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TABLE 5.—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Mine	County	Nature and Cause of Accident in Brief
Aug. 3	William Lescavage, -- John Grobosky, ----	Polish, ---- Polish, ----	Miner, ---- Miner, ----	38 25	M. S.	Kaska William, ----		Hands and face burned by gas. Les- cavage went into the breast with a naked lamp on his head.
5	Frank Cushok, ----	Polish, ----	Laborer, ----	35	S.	Buck Mountain, ----			Leg broken. He was pulling down some loose top coal at face of No. 5 breast, West Buck Mountain gangway, when it fell on him.
18	Rafael Rochlino, ----	Italian, ----	Jackman, ----	34	S.	Oneida, ----		Leg broken. A piece of clay rolled down the stripping bank and struck him. Out- side.
29	Adam Subalitis, ----	Lithuanian, ----	Miner, ----	26	M.	Silver Creek, ----		Hands and face burned by explosion of gas at face of No. 11 breast, Middle split, No. 1 plane.
Sept. 12	Joseph Coppl, ----	Italian, ----	Laborer, ----	35	M.	Audenried No. 4, ----	Schuylkill, ----	Head cut and injured internally by fall of slate. He was assisting the miner in barring down the slate at face of breast, when it fell on him.
12	Joseph Wassel, ----	Lithuanian, ----	Runner, ----	20	S.	Buck Mountain, ----		Fingers crushed. Hand caught while he was coupling the cars when in motion.
15	Patrick Breslin, ----	American, ----	Miner, ----	35	S.	Lucy C. R., ----		Head and face cut by premature blast of dynamite while forcing it into a hole.
15	Charles Breslin, ----	American, ----	Miner, ----	36	S.	Lucy C. R., ----		Head and face cut by a premature blast of dynamite while forcing it into a hole.
18	Joseph Tosh, ----	Lithuanian, ----	Miner, ----	22	S.	Vulcan, ----		Foot injured. A piece of slate fell on it at face of Breast 44, West Seven Foot, No. 3 level.
26	Stiney Gerskey, ----	Polish, ----	Miner, ----	47	M.	Morea, ----		Leg fractured. He was barring down a piece of top coal at face of breast, when it fell on him.
Oct. 5	Jacob Beronas, ----	Lithuanian, ----	Miner, ----	48	S.	Middle Lehigh, ----		Back injured. He was drilling a hole at face of gangway when a piece of top slate fell on him.

Oct. 6	William Kuder, -----	Polish, ---	Miner, -----	38	M.	Middle Lehigh, -----	Body injured by premature blast. In lighting his fuse he cut it short. Before he could reach a place of safety he was struck by the coal thrown from the blast.
9	James Camol, -----	Italian, ---	Driver, -----	18	S.	Morea, -----	Fracture of the hip. Caught between gangway timber and mine car.
23	Francis O'Neil, -----	American, --	Driver, -----	18	S.	Kaska William, -----	Bruised on back, side and face. He fell and was dragged under dumper on dirt bank. Outside.
Nov. 9	Anthony Powolltras, --	Lithuanian, --	Miner, -----	55	M.	Vulcan, -----	Body squeezed by being caught between mine car and chute on gangway.
12	Frank Shinka, -----	Lithuanian, --	Miner, -----	24	S.	Vulcan, -----	Head and face burned by gas. He went up into his breast with naked lamp in the morning, after being told not to do so. The breast had not been examined, as the fire boss was not at work on account of sickness.
13	John Lucatch, -----	American, --	Slatepicker-boss, --	21	S.	Oneida, -----	Leg cut and body bruised. He was standing on the front end of a trip of empty mine cars that were being shifted on the turnout. He leaned over to put sprags in the pocket on side of car and in doing so he slipped and fell under the moving trip. Outside.
Dec. 16	Paul Crone, -----	Polish, ---	Miner, -----	42	M.	Vulcan, -----	Hands and face burned by powder. He was forcing a cartridge of black powder into a hole filled with O. H. 4 gas. The cartridge forced the gas out on his naked lamp and the gas was ignited and communicated with the powder in hole.
17	John Hobola, -----	Polish, ---	Miner, -----	21	S.	Middle Lehigh, -----	Arm broken by mine cars. He was riding up No. 3 slope and extended his arm above the line of the car and it was caught against the timber in slope.
23	Stiney Grunowski, -----	Lithuanian, --	Miner, -----	30	S.	Silver Creek, -----	Hands and face burned by gas. He fired a blast in his breast and then went down to the gangway for timber. When he returned he did not examine his place to see if it was free from gas but carried his naked lamp on his head and ignited the gas that had accumulated while he was absent.

Schuylkill, ---

CONDITION OF COLLIERIES

LEHIGH AND WILKES-BARRE COAL COMPANY

Audenried No. 4.—Ventilation and drainage good. Condition as to safety good.

Honey Brook No. 5.—Ventilation and drainage good. Condition as to safety good.

MILL CREEK COAL COMPANY

Buck Mountain Colliery.—Ventilation and drainage poor; condition as to safety good.

Vulcan Colliery.—Ventilation and drainage poor; condition as to safety good.

Middle Lehigh Colliery.—Ventilation and drainage fair; condition as to safety good.

PHILADELPHIA AND READING COAL AND IRON COMPANY

Silver Creek Colliery.—Ventilation and drainage good; condition as to safety good.

Eagle Hill Colliery.—Ventilation and drainage good; condition as to safety good.

COXE BROTHERS AND COMPANY, INCORPORATED

Oneida.—Ventilation and drainage good; condition as to safety good.

DODSON COAL COMPANY

Morea.—Ventilation and drainage fair; condition as to safety good.

TRUMAN M. DODSON COAL COMPANY

Kaska William Colliery.—Ventilation fair; drainage good; condition as to safety good.

MARYD COAL COMPANY

Maryd Colliery.—Ventilation and drainage fair; condition as to safety good.

EAST LEHIGH COAL COMPANY

East Lehigh Colliery.—Ventilation fair; drainage and sanitary condition fair.

PHILLIPS COAL COMPANY

Silver Hill.—Ventilation fair; drainage good; condition as to safety good.

BIG CREEK COAL COMPANY

Moss Glenn Colliery.—Ventilation fair; drainage good; condition as to safety good.

PORT CARBON COAL COMPANY

Lucy C. R. Colliery.—Ventilation and drainage fair; condition as to safety good.

GORMAN AND CAMPION

Bell Colliery.—Ventilation and drainage fair; condition as to safety good.

WILLIAM COOK

Oakley Colliery.—Ventilation and drainage fair; condition as to safety good.

IMPROVEMENTS

LEHIGH AND WILKES-BARRE COAL COMPANY

Audenried No. 4 Colliery.—Electric haulage plant, No. 4 slope.

Tunnel Buck Mountain to Lykens 3rd Lift, No. 21 slope.

No. 16 slope driven through rock from Buck Mountain to Lykens Valley vein.

Tunnel Buck Mountain to Gamma basin, No. 11 slope.

No. 3 inside slope sunk to basin of Lykens.

No. 4 inside slope, shaft basin sunk 300 feet.

Honey Brook No. 5 Colliery.—300 H. P. return tubular boilers, Honey Brook reservoir.

Tunnel Gamma to Wharton basin, Green Mountain Water Level tunnel.

No. 20 slope sunk to Lykens basin.

MILL CREEK COAL COMPANY

Buck Mountain Colliery.—A slope was sunk from the seventh level to the basin in the Buck Mountain vein; length 175 feet. A pair of hoisting engines was installed on the seventh level to hoist the coal to this level.

The main boiler house was rebuilt.

Middle Lehigh Colliery.—First level tunnel was completed to the Buck Mountain vein, North Dip; total length 704 feet.

No. 9 slope was sunk east of No. 7 slope, and a pair of hoisting engines erected on the surface.

A new stripping was connected on the Bottom Split of Mammoth vein, North Dip.

17,681 feet of gangway driven or reopened during the year.

Three "Parabolic" picking plates were placed in the breaker.

PHILADELPHIA AND READING COAL AND IRON COMPANY

Silver Creek Colliery.—Tunnel mentioned in last year's report from the Top Split to Holmes vein has been completed to the Orchard South Dip vein at a distance of 655 feet.

A 3 inch diamond drill hole, on a 32 degree pitch, is being drilled from the Skidmore North Dip vein, No. 3 plane level to tap Windy Harbor water.

An air tunnel has been completed from the Top Split vein to the Primrose at a distance of 555 feet.

Tunnel mentioned in last year's report in No. 4 drift from the Orchard to Holmes vein has been completed from the Holmes to the Top Split, South Dip, at a distance of 500 feet.

A tunnel 75 feet long has been completed from the E. Bottom Split to Skidmore vein at Breast No. 66, No. 3 plane level.

A timber treating plant has been erected, consisting of 2 oil tanks and 1 timber treating plank.

An electrically driven fan has been erected on No. 4 drift.

A water level drift has been opened on the Buck Mountain vein.

A water level drift is being driven on the Skidmore vein, east and west of ravine at Old Ledger vein.

An air hole and end outlet in the Skidmore vein, No. 4 plane level, has been driven to the surface a distance of 1,260 feet.

An air locomotive has been installed to haul coal from the bottom of No. 4 plane to the head of No. 3 plane.

Eagle Hill Colliery.—A tunnel of 120 yards has been driven from the Big Diamond to the Orchard in the Diamond water level drift.

A water level drift has been opened on the Little Orchard South Dip.

A tunnel 38 yards long has been completed in the Primrose North Dip drift from the Primrose to the Orchard vein.

A water level drift has been opened on the Diamond North Dip vein, and a tunnel, 10 yards long completed to Little Diamond North Dip.

A proving tunnel has been driven from the West Skidmore, 4th Lift, cutting a vein 5 feet 4 inches thick.

A self-acting plane has been completed to take coal from No. 2 shaft.

A rock power plane to take rock from top of slope to breast of slush dam has been completed.

A saw mill has been erected to saw the best of the old mine timber into plank that can be utilized.

An 8 foot blow fan has been placed on Primrose North Dip water level drift.

A 12 foot blow fan has been placed on Diamond South Dip water level drift.

Eagle Hill No. 2 Colliery.—An air tunnel, 265 feet, has been driven from heading in the East Skidmore gangway to the Top Split, and a hole driven on Top Split 60 feet, connecting No. 2 Colliery workings with Primrose air shaft.

Gangways, chutes and headings are being driven on the Skidmore and Buck Mountain veins East and West.

A traveling and mule way has been started through rock and coal to connect No. 1 and 2 Collieries.

COXE BROTHERS AND COMPANY, INCORPORATED

Oneida Colliery.—Oneida Slope No. 1. The No. 18 East Dip gangway has been driven 2,080 feet and has reached the line of No. 8 slope. Slope and pipe-way to the south and airway to the north are

being started, while the Dip gangway is continued in the basin for sump room and further development. The Southeast gangway, 3rd lift is being continued and appears to be the first gangway that will penetrate the cross fault, which had so far stopped every gangway before reaching the Humboldt boundary line. A tunnel was driven from this gangway to the North, 100 feet long, to develop the Buck Mountain on the North side of the basin to expedite the opening of coal and improve the ventilation by driving up to No. 14 East gangway.

No. 8 Slope has been graded and the track laid to the 2nd Lift and will be extended to the 3rd Lift, from which the openings are already driven. Gangways in the Wharton vein were continued east and west, but with very unsatisfactory results, the vein averaging less than 2 feet.

The drainage tunnel intended to drain the No. 1 and Humboldt basin to elevation of 1,212 feet has been started North and South. The tunnel will be, including approach open cut and drift, 5,100 feet long, of which 1,340 feet have been driven. It is expected that connection will be made by January 1, 1910.

Oneida Slopes 2 and 4.—Gangways are being driven eastward from the tunnel mentioned in last year's report; a hoisting engine installed to sink in the Buck Mountain to lower levels, and Slope No. 7 started. To avoid heavy pitch and subsequent expensive grading, the slope is being driven across the pitch in rock on 30 degrees. It is intended to follow near on line of the fault, which cut out the East gangways previously.

An oil burning locomotive was installed in No. 4 slope, with satisfactory results.

Oneida Slopes Nos. 3 and 5.—These slopes continued as the principal producers and gangways are being driven to the East in the Buck Mountain vein. Some robbing has been done in the Gamma vein; very little on the West side in the Buck Mountain.

Strippings are advancing slowly; 66,870 yards of first class were removed in 1908, which brings the total to 91,096 yards.

Outside.—An artesian well was sunk west of Slope No. 6 during the dry spell, and arrangements are being made with the Oneida Water Company to furnish an additional supply from Wolf's Run and Barnes' Run, on the Humboldt property, to avoid the expensive water train service in the future.

DODSON COAL COMPANY

Morea Colliery.—Tunnel driven from the Shaft lower level, Buck Mountain, North Dip to Seven Foot, North Dip, a distance of 36 2-3 yards.

Tunnel driven from the North Dip Skidmore to South Dip Skidmore, a distance of 30 yards.

Tunnel driven from No. 1 level, East Bottom Split to Top Split, a distance of 13 yards.

Tunnel driven from No. 1 level West Bottom Split to Skidmore, a distance of 5 yards.

Tunnel driven from the Skidmore Level North Dip to Bottom Split, a distance of 56 2-3 yards.

A condenser has been installed on the Third level pumps.

Outside. The east side of breaker has been renewed.

A new Cochrane feed water heater has been added to boiler plant.

A new fan engine has been installed for force draft for boilers.

TRUMAN M. DODSON COAL COMPANY

Kaska William Colliery.—Tunnel driven from the Top Split to Bottom Split, a distance of 74 yards.

Tunnel driven from Bottom Split to Skidmore, a distance of 22 yards.

Tunnel driven from Top Split to Seven Foot, a distance of 25 yards.

Also tunnel driven from Seven Foot to Shaft, a distance of 134 yards.

All the above tunnels were driven on the First level of new shaft.

An airway has been driven from this 1st level of new shaft, on Skidmore vein, to No. 1 Slope level.

Also an air tunnel driven from this Skidmore to Bottom Bench, for ventilation.

Outside. A new side has been added to breaker; and a new pair of engines erected on dirt bank. A new locomotive has been installed to run from breaker to dirt bank.

MARYD COAL COMPANY

Maryd Colliery, Inside.—Duplex plunger pump installed in No. 3 slope, 18 x 8 x 18 inches; cast iron column to surface.

No. 2 Slope and No. 1 Shaft workings connected by tunnel north to Holmes vein.

East Orchard vein gangway enlarged to serve as a sump for shaft for 1st level pumps.

Tunnel driven from Big to Little Orchard vein east side of shaft and gangway driven in Little Orchard vein to serve as car hoist and empty car turnout for 1st level bottom.

Turnout in West Holmes vein gangway enlarged.

Turnout in East Diamond vein driven 106 feet during year, not yet completed.

Tunnel and parallel airway tunnel is being driven from East Diamond vein to cut Orchard veins.

Airway tunnel is being driven from East Diamond vein gangway to Little Orchard vein to serve as return airway for 2nd level workings.

Shaft guides placed from 1st level to surface and shaft put in condition to hoist coal.

Number 29 Breast East Diamond vein gangway driven to surface to serve as intake airway and second outlet.

Outside. A pair of Vulcan acting engines 30 x 48 inches conical drums 9 feet x 11 feet.

Frame engine house 45 x 48 feet erected.

Shaft equipped with two Vulcan self dumping cages and wooden head frame with chute to 54 inch conveyor line to top of breaker.

On refuse bank 14 x 18 inch hoisting engines erected and single 12 x 20 inch engine to drive 54 inch refuse conveyor line.

One right hand 16 x 30 inch direct acting engine for jig drives.

Boiler plant and steam lines.

96 feet steel header main over boilers, 16 inch diameter.

1,000 feet 12 inch steam main to shaft engines, pumps, fans, etc., 200 feet 8 inch steel pipe to breaker and jig engines.

700 feet spiral riveted galvanized pipe exhaust line from breaker and jig engines to boiler feed water heater.

Breaker burned down July 10. Work was immediately started to rebuild and on January 1, 1909, new structure was about completed.

BIG CREEK COAL COMPANY

Moss Glenn Colliery.—A new breaker has been built with a capacity of 500 tons per day. Started to prepare coal on September 15. A track was laid from slope a distance of 2,000 feet to top of plane; length of plane down mountain side 600 feet on 25 degrees. A track has been laid from bottom of plane 2,000 feet to the breaker; total length of new track laid 4,600 feet.

MINE FOREMEN'S EXAMINATIONS

The annual examination of applicants for certificates of qualification as Mine Foremen and Assistant Mine Foremen was held in Union Hall, Pottsville, June 19 and 20.

The Board of Examiners was composed of the following members: John Curran, Mine Inspector, Pottsville; James Tinley, Superintendent, Tamaqua; Nicholas Murrey, Miner, Cumbola; William J. Brennan, Miner, New Philadelphia.

The following persons were granted certificates:

Mine Foremen

Thomas M. Davis, Mahanoy City; John W. Price, Mahanoy City; James Boyle, Kaska; John P. Davis, Coaldale; Walter Yemm, Coaldale; David Yemm, Coaldale; William Hoffman, Tamaqua; E. W. Klingerman, McAdoo; John C. Gallagher, McAdoo; Cornelius Dougherty, Tuscarora; H. B. Lewis, Silver Creek.

Assistant Mine Foremen

Daniel Rodgers, Coaldale; David Phillips, Coaldale; Charles Shellhamer, Coaldale; William Whetstone, Tamaqua; Harold A. Lockwood, Tamaqua; George Pierson, Tamaqua; John F. DeLay, Tamaqua; James B. Boner, Seek; A. J. Feely, Port Carbon; Daniel Harkins, Silver Creek; William Beynon, Mahanoy City; William E. Davis, Mahanoy City; Conrad Dresch, Mahanoy City; Andrew Liptock, McAdoo; Matthias Sartoria, Sheppton; Charles Van Blaragau, Oneida; Bernard Monahan, Cumbola; Valentine Kline, Kaska; Edward Flaherty, Morea.



Nineteenth District

SCHUYLKILL COUNTY

Pottsville, Pa., March 6, 1909.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor of transmitting herewith my annual report as Inspector of Mines of the Nineteenth Anthracite District for the year ending December 31, 1908.

Respectfully submitted,

MICHAEL J. BRENNAN, Inspector.

SUMMARY OF STATISTICS

Number of collieries,	17
Number of mines,	45
Number of mines in operation,	45
Number of tons of coal shipped to market,	2,251,018
Number of tons used at mines for steam and heat,	472,001
Number of tons sold to local trade and used by employes,	37,767
Number of tons produced,	2,760,786
Number of tons produced by compressed air machines, ...	—
Number of tons produced by electrical machines,	—
Number of persons employed inside of mines,	4,652
Number of persons employed outside,	2,442
Number of fatal accidents inside of mines,	22
Number of fatal accidents outside,	4
Number of non-fatal accidents inside of mines,	25
Number of non-fatal accidents outside,	1
Number of tons of coal produced per fatal accident inside,	125,490
Number of persons employed per fatal accident inside, ...	211
Number of persons employed per fatal accident outside, ..	610
Number of persons employed per non-fatal accident inside,	186
Number of persons employed per non-fatal accident outside,	2,442
Number of wives made widows,	15
Number of children orphaned,	29
Number of steam locomotives used inside of mines,	1
Number of steam locomotives used outside,	20
Number of electric motors used inside,	17
Number of fans in use,	37
Number of gaseous mines in operation,	28
Number of non-gaseous mines in operation,	16
Number of new mines opened,	8
Number of old mines abandoned,	7

TABLE A

PRODUCTION OF COAL

Names of Operators	Tons
Philadelphia and Reading Coal and Iron Company,	1,000,517
St. Clair Coal Company,	493,300
Lytle Coal Company,	378,173
Pine Hill Coal Company,	274,548
Oak Hill Coal Company,	259,180
Buck Run Coal Company,	164,506
Mt. Hopé Coal Company,	94,061
John H. Davis Company,	32,313
E. White and Company,	30,607
Butcher Creek Coal Company,	27,500
Cain Brothers Coal Company,	4,188
Joseph H. Denning Company,	1,636
Salem Hill Coal Company,	257
Total,	<u>2,760,786</u>

Production by Counties

Schuylkill,	<u>2,760,786</u>
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TABLE B.—Fatal and non-fatal accidents inside and outside of mines; number of tons of coal produced per accident; number of persons employed; number employed per accident

Names of Operators	Fatal Accidents			Non-fatal Accidents			Tons of coal produced per fatal accident inside	Number of employees inside	Number of employees outside	Total number of employees	fatal accident		non-fatal accident	
	Inside	Outside	Total	Inside	Outside	Total					Number of employees inside per fatal accident	Number of employees outside per fatal accident	Number of employees inside per non-fatal accident	Number of employees outside per non-fatal accident
Philadelphia and Reading Coal and Iron Co.,	10	1	11	9		9	111,168	2,140	1,121	3,261	214	1,121	238	
St. Clair Coal Co.,	3	1	4	5		5	98,660	547	307	854	182	307	109	
Lytle Coal Co.,	2		2	5		5	75,635	546	234	780	273		109	
Pine Hill Coal Co.,	3		3	1		1	91,516	430	201	631	143		430	
Oak Hill Coal Co.,	1	2	3	3	1	4	259,189	86,398	200	650	450	100	150	200
Buck Run Coal Co.,	3		3				54,535	245	112	357	82			
Mt. Hope Coal Co.,				1		1	94,661	117	73	190			117	
E. White and Co.,				1		1	30,607	51	47	98			51	
Miscellaneous companies,								126	147	273				
Totals and averages for district..	22	4	26	25	1	26	110,431	4,652	2,442	7,094	211	610	186	2,442

TABLE C.—Classification of Fatal Accidents Inside and Outside of Mines

	Months												Totals	Percentages
	January	February	March	April	May	June	July	August	September	October	November	December		
Causes of Accidents Inside														
Falls of coal, -----		1			1								2	9.09
Falls of slate, -----		2		1	2								5	22.74
Falls of roof, -----							2	1					3	13.64
Mine cars, -----									1		1		2	9.09
Explosions of gas and dust, -----					2					2			4	18.18
Premature blasts, -----	1												1	4.54
Falling into shafts, -----										1			1	4.54
Miscellaneous, -----			1		1			1				1	4	18.18
Totals, -----	4	1	1	1	6		2	2	1	3	1	1	22	100.00
Causes of Accidents Outside														
Cars, -----			1						1				2	50.00
Machinery, -----					1								1	25.00
Miscellaneous, -----										1			1	25.00
Totals, -----			1		1				1	1			4	100.00
Grand totals inside and outside, -----	4	2	1	1	7		2	2	2	4	1	1	26	

TABLE D.—Classification of Non-fatal Accidents Inside and Outside of Mines

	Months												Totals	Percentages
	January	February	March	April	May	June	July	August	September	October	November	December		
Causes of Accidents Inside														
Falls of coal, -----					1		2				2	4	9	36.00
Falls of roof, -----								1					1	4.00
Mine cars, -----	1			1	1					1			4	16.00
Explosions of gas and dust, -----				2	4				1			1	8	32.00
Premature blasts, -----	2												2	8.00
Miscellaneous, -----				1									1	4.00
Totals, -----	1	2		4	6		2	1	1		3	5	25	100.00
Causes of Accidents Outside														
Miscellaneous, -----	1												1	100.00
Totals, -----	1												1	100.00
Grand totals inside and outside, -----	2	2		4	6		2	1	1		3	5	26	

TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
Inside													
Miners, -----		3	1	1	4		1	1		2		1	14
Miners' laborers, -----		1			1		1						3
Drivers and runners, -----					1			1			1		3
All other employes, -----								1	1				2
Totals, -----		4	1	1	6		2	2	1	3	1	1	22
Outside													
All other employes, -----			1		1				1	1			4
Totals, -----			1		1				1	1			4
Grand totals inside and outside, -----		4	2	1	7		2	2	2	4	1	1	26

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
Inside													
Miners, -----		2		1	5		2		1		2	4	17
Miners' laborers, -----				2	1			1				1	5
Drivers and runners, -----				1							1		2
Doorboys and helpers, -----	1												1
Totals, -----	1	2		4	6		2	1	1		3	5	25
Outside													
All other employes, -----	1												1
Totals, -----	1												1
Grand totals inside and outside, -----	2	2		4	6		2	1	1		3	5	26

TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												Totals	
	January	February	March	April	May	June	July	August	September	October	November	December		
American, -----			1		4			1	1	2				9
Welsh, -----								1						1
Polish, -----		1			1							1		4
Slavonian, -----		1	1		2				1				1	5
Lithuanian, -----		2		1				1		2				6
Greek, -----								1						1
Totals, -----	4	2	1		7		2	2	2	4	1	1		26

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

	Months												Totals	
	January	February	March	April	May	June	July	August	September	October	November	December		
American, -----								1	1					1
English, -----							1							1
Polish, -----		1			2		1		1					5
Italian, -----												1		2
Slavonian, -----											2	2		5
Lithuanian, -----				1	4							1	1	10
Russian, -----											1			1
Swedish, -----												1		1
Totals, -----	2	2		4	6		2	1	1		3	5		26

TABLE I.—Operators and mines, and of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents, and number of persons employed inside

Names of Operators and Mines	Kind of opening	Gasous or non-gasous	Method of ventilation	Diameter of fan in feet	Width of blades in feet	Depth of blades in feet	Number of revolutions per minute	Water gauge developed—in inches	Name of fan	Power used	Number of splits of air currents	Number of cubic feet of air per minute entering the mine at inlet	Total quantity of air per minute circulating in all the splits in cubic feet	Number of cubic feet per minute passing out at outlet	Number of persons employed inside
Philadelphia and Reading Coal and Iron Co.															
Wadesville Colliery:															
Wadesville,	Shaft,-----	Gasous,	Fan,-----	21	7	6	73	1.7	{Guibal,-----	Steam,---	{ 10	77,920	51,030	80,615	150
Wadesville,	Shaft,-----	Gasous,	Fan,-----	21	7	6	76	1.7			{ 9	81,175	51,030	82,705	198
Phoenix Park Colliery:															
Phoenix Park Diamond,	Slope,-----	Gasous,	Fan,-----	15	5	3.5	90	1.5	{Guibal,-----	Steam,---	{ 5	31,600	20,100	31,850	115
Phoenix Park Peach,	Slope,-----	Gasous,	Fan,-----	5	2	1.4	220	.4			{ 1	15,820	4,500	15,960	14
Mountain,	Drift,-----	Gasous,	Fan,-----	5	2	1.4	85	.2			{ 1	14,100	3,200	14,200	8
Phoenix Park Salem,	Shaft,-----	Non-gas.,	Fan,-----	21	7	6	80	.2			{ 6	68,800	44,600	72,050	202
Phoenix Park Tracey	Shaft,-----	Gasous,	Fan,-----	21	7	6	84	.2			{ 6	70,519	28,715	71,032	119
Otto Colliery:															
Red Ash,	Slope,-----	Gasous,	Fan,-----	15	5	4.6	40	.1			{ 1	35,840	6,200	33,100	20
No. 2,	Shaft,-----	Gasous,	Fan,-----	15	5	4.6	40	.1			{ 1	8,230	3,000	8,420	8
Holmes No. 3,	Drift,-----	Gasous,	Fan,-----	15	1.8	1.3	100	2	{Guibal,-----	Steam,---	{ 3	27,480	7,500	27,000	32
Holmes No. 3,	Slope,-----	Gasous,	Fan,-----	15	5	4.6	40	.5			{ 2	16,820	9,200	16,650	34
Welsh Company,	Drift,-----	Non-gas.,	Fan,-----	12	5	4.6	61	.7			{ 2	40,000	13,300	40,800	42
White Ash S. Dip,	Slope,-----	Gasous,	Fan,-----	15	5	3.5	56	.75			{ 2	38,250	14,500	39,400	50
White Ash Bore Hole,	Slope,-----	Gasous,	Fan,-----	15	5	3.5	80	1			{ 3	66,976	52,100	70,398	150
Glendower Colliery:															
West,	Slope,-----	Gasous,	Fan,-----	12	4	3.6	120	1.3	{Guibal,-----	Steam,---	{ 10	92,408	35,807	97,727	170
Taylorville,	Slope,-----	Gasous,	Fan,-----	21	5.5	4.6	75	.7			{ 8	25,120	14,300	27,200	71
Pine Knot Colliery:															
Pine Knot,	Shaft,-----	Gasous,	Fan,-----	18	6	5.2	58	1	{Guibal,-----	Steam,---	{ 4	24,580	9,880	26,300	23
Thomaston,	Slope,-----	Non-gas.,	Fan,-----	18	6	5.2	64	1.1			{ 4				
Thomaston,*	Drift,-----	Non-gas.,	Fan,-----	18	6	5.2	64	1.1			{ 4				

*Not in operation.

TABLE 1.—Operators, location of collieries, railroads, etc.

Names of Operators and Collieries	County	Name of General Superintendent	Post Office	Name of Superintendent	Post Office	Railroad to Mine
Philadelphia and Reading Coal and Iron Co. Wadesville, Phoenix Park, Orto, Ghendover, John Veith, Anchor Washery,	Schuylkill,	W. J. Richards,	Pottsville,	Reese Tasker,	Pottsville,	P. and R.
St. Clair Coal Co. St. Clair, St. Clair Washery,	Schuylkill,	---	---	William T. Smythe,	Pottsville,	P. and R.
Lytie Coal Co.	Schuylkill,	R. A. Quim,	Wilkes-Barre,	Arthur Kennedy,	Minersville,	Pennsylvania
Pine Hill Coal Co. Oak Hill, Oak Hill Coal Co.	Schuylkill,	---	---	G. W. Keiser,	Minersville,	Pennsylvania
Buck Run Coal Co. Mt. Hope Coal Co.	Schuylkill,	James B. Neale,	Minersville,	Charles A. Schwenk, John Conway,	Minersville, Minersville,	P. and R. P. and R.
John H. Davis Co. Ellsworth, Howard,	Schuylkill,	John H. Davis,	St. Clair,	I. D. Boehme,	Port Carbon,	P. and R. P. and R.
Butcher Creek Coal Co. Laurel Run,	Schuylkill,	James J. Whims,	St. Clair,	---	---	P. and R.

Cain Brothers Coal Co. Cain,*	Schuykill,-----	Michael Cain,-----	Pottsville,-----	-----	P. and R.
Joseph H. Denning Co. Sebas-topol,-----	Schuykill,-----	Joseph H. Den- ning,-----	St. Clair,-----	-----	P. and R.
Salem Hill Coal Co. Salem Hill,-----	Schuykill,-----	-----	-----	Charles F. Pen- man,-----	By team.
Crystal Run Coal Co. Broad Mountain,*	Schuykill,-----	-----	-----	-----	-----
Darkwater Coal Co. Newcastle,†	Schuykill,-----	-----	-----	-----	-----

*Abandoned.
†Idle.

TABLE 2.—Number of tons of coal mined, number of days worked, number of persons employed, number killed and injured, quantity of powder and dynamite used, etc.

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employees	Total production of coal in tons	Number of days worked	Number of employees	Number of fatal accidents	Number of non-fatal accidents	Number of kegs of powder used	Number of pounds of dynamite used	Number of horses and mules
Philadelphia and Reading Coal and Iron Co.												
Wadesville		349,451	29,239	1,432	380,122	267	765	3	5	2,530	66,686	51
Phoenix Park		143,745	23,200	2,029	168,994	237	640	3	2	3	75,883	71
Otto		116,933	49,863	1,839	168,025	236	723	2	1	1,257	91,770	73
Glenover	Schuylkill	94,187	33,476	482	128,095	183	376	1	1	562	76,169	43
Pine Knot		52,359	57,153	56	109,548	182	555	1	1	117	51,557	29
John Veith		1,783			1,783		123	1			42,675	7
Ancory washery		38,258	5,692		43,950		79				300	
Totals		796,046	198,633	5,818	1,000,517		3,261	11	9	4,469	404,880	274
St. Clair Coal Co.												
St. Clair Washery	Schuylkill	320,472	80,030	6,422	406,924	228	821	4	5	21,056		61
		76,873	9,509		86,376		30					
Totals		397,345	89,539	6,422	483,300		854	4	5	21,056		61
Lytle Coal Co.												
Lytle	Schuylkill	280,749	89,600	7,824	378,173	258	780	2	5	211	24,657	90
Pine Hill Coal Co.												
Pine Hill	Schuylkill	248,423	25,000	1,125	274,548	249	631	3	1	7,190	24,000	36
Oak Hill Coal Co.												
Oak Hill	Schuylkill	225,118	31,000	3,062	259,180	250	650	3	4	5,808	54,144	52

Buck Run, -----	Buck Run Coal Co.	Schuylkill, -----	145,641	18,300	565	164,506	232	357	3	661	62,337	32
Mt. Hope, -----	Mt. Hope Coal Co.	Schuylkill, -----	83,029	4,800	6,232	94,061	243	190	1	110	18,800	15
Ellsworth, -----	John H. Davis Co.	Schuylkill, -----	27,813	3,800	700	32,313	297	111		175	8,500	7
Howard, -----	E. White and Co.	Schuylkill, -----	22,951	7,500	156	30,607	228	98	1	260	3,600	8
Laurel Run, -----	Butcher Creek Coal Co.	Schuylkill, -----	25,900	3,525	75	27,500	228	127			15,000	5
Cain,* -----	Cain Brothers Coal Co.	Schuylkill, -----			4,188							
Sebastopol, -----	Joseph H. Denning Co.	Schuylkill, -----		200	1,436	1,636	265	7		5	300	7
Salem Hill Colliery, -----	Salem Hill Coal Co.	Schuylkill, -----		93	164	257	17	28		2	93	
Grand totals, -----			2,251,018	472,001	37,767	2,760,786		7,094	26	39,947	616,311	587

*This colliery was abandoned in February. Unable to get statistics.

Table 3.—Continued

Names of Operators and Collieries	County	Inside										Outside							Grand total inside and outside			
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Doorboys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Foremen	Blacksmiths and carpenters	Engineers and firemen	State pickers (boys)	State pickers (men)		Hookeepers and clerks	All other employes	Total outside
Buck Run Coal Co.	Schuylkill, -----	1	1	3	98	37	10	4	2	81	8	245	1	1	9	13	9	8	8	63	112	357
Mt. Hope Coal Co.	Schuylkill, -----	1	2	---	47	46	6	---	---	7	8	117	1	1	5	20	8	---	1	37	73	190
John H. Davis Co.	Schuylkill, -----	2	1	1	23	7	3	2	16	---	---	55	1	1	2	5	15	---	1	31	56	111
E. White and Co.	Schuylkill, -----	1	---	---	22	18	3	2	---	---	5	51	1	---	2	8	7	2	1	26	47	98
Butcher Creek Coal Co.	Schuylkill, -----	1	1	---	20	25	4	1	---	---	---	52	1	1	5	4	3	---	2	59	75	127
Joseph H. Denning Co.	Schuylkill, -----	---	---	---	8	---	---	---	---	---	3	---	---	---	---	---	---	---	---	4	4	7
Salem Hill Coal Co.	Schuylkill, -----	1	1	1	9	1	3	---	---	---	16	---	---	---	2	3	4	---	1	2	12	28
Grand totals, -----		19	44	32	1,875	877	278	50	33	675	769	4,652	9	24	129	297	414	173	54	1,342	2,442	7,094

Table 3.---Part 2

Names of Operators and Collieries	County	Number of Days Worked in Breaker												Total				
		January	February	March	April	May	June	July	August	September	October	November	December					
Philadelphia and Reading Coal and Iron Co.																		
Wadesville, -----		22	17	24	24	24	18	18	19	26	27	23	25	267				
Phoenix Park, -----		22	17	23	24	23	16	13	14	18	20	23	24	237				
Otto, -----	Schuylkill, -----	22	17	20	24	24	15	13	14	19	21	23	24	235				
Glendower, -----		22	17	4	23	24	16	13	14	19	18	23	23	193				
Pine Knot, -----		19	17	26	13	2	2	13	7	17	21	23	24	182				
St Clair, -----	Schuylkill, -----	21	17	14	22	23	16	15	16	19	21	21	23	228				
Lytle, -----	Schuylkill, -----	25	25	23	24	23	26	13	15	20	19	23	22	258				
Fine Hill, -----	Schuylkill, -----	25	24	24	24	22	25	18	15	5	22	23	24	249				
Oak Hill, -----	Schuylkill, -----	24	22	19	20	21	21	21	19	17	23	21	22	250				
Buck Run, -----	Schuylkill, -----	24	18	14	23	23	16	13	15	19	21	23	23	232				
Mt. Hope, -----	Schuylkill, -----	24	19	19	23	22	22	14	18	20	20	20	22	243				
Ellsworth, -----	Schuylkill, -----	25	23	25	25	26	26	25	26	22	27	24	23	297				
Howard, -----	Schuylkill, -----	4	18	18	20	21	20	22	20	23	23	18	21	228				

Table 3—Part 2—Continued

Names of Operators and Collieries	County	Number of Days Worked in Breaker												Total
		January	February	March	April	May	June	July	August	September	October	November	December	
Laurel Run, ----- Butcher Creek Coal Co.	Schuylkill, -----	21	20	23	25	22	21	15	12	12	21	20	16	228
Sebastopol, ----- Joseph H. Denning Co.	Schuylkill, -----	26	21	24	24	23	22	12	24	21	21	23	24	265

TABLE 4.—Fatal accidents inside and outside

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Mine	County	Nature and Cause of Accident in brief
Feb. 7	Thomas Matulavage	Lithuanian	Miner	49	M.	1		Wadesville,		Fatally injured. He ignited a blast in face of breast and then retired to the heading. The fuse burned to a point where there was a knot or connection and made a report which he thought was the cap exploding. He supposed that the shot had missed fire and when he went to the face to drill out the charge the blast exploded, injuring his head and arm. Died the next day.
19	Breno Bobsavage	Lithuanian	Laborer	29	S.			Oak Hill,		Fatally injured by fall of slate while shoveling coal into car from pillar stump chute.
21	Joe Sheloski	Polish	Miner	44	M.	1	2	Buck Run,		Killed by fall of slate. While he was removing a plank from the roadway in the breast a piece of slate fell on him.
28	Albert Oseka	Slavonian	Miner	49	M.	1		St. Clair,	Schuylkill,	Killed by fall of coal. He was shoveling coal from under a piece of coal in which he had prepared a blast when the coal fell on him.
Mar. 7	John Sorocotch	Slavonian	Laborer	16	S.			Oak Hill,		Killed. Struck by culm dumper at foot of plane. The topman had neglected to hitch a rope to the car and it ran down the plane. He tried to stop it with a head block, but could not. Outside.
10	John Gibson	American	Miner	40	M.	1	4	Lytle,		Killed by rush of coal from upper side of monkey heading while securing it with timber.
April 6	John Onescavage	Lithuanian	Miner	40	M.	1	2	Wadesville,		Killed by fall of slate at face of breast. He had tested the roof a short time before the accident and had told his partner that it was solid.

TABLE 4.—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Mine	County	Nature and Cause of Accident in Brief	
May 2	Mike Taraviskri, ----	Slavonian, ----	Laborer, ----	43	M.	1	4	St. Clair, ----	Schuylkill, ----	Killed by fall of top slate. They had tried to pull down the piece of top slate, but failed, and while they were boring a hole in the coal at the face of the breast beneath it, it fell on them, killed. It is supposed that he was kicked by a mule he was driving. He was found lying on the upper side of the gangway near a rail. His mule was caught running out the gangway, killed by fall of coal at face of breast while drilling a hole. He had trimmed down all loose pieces of coal after a blast and thought the roof was secure. Fatally burned by explosion of gas. They fired a blast at face of breast which blocked the downcast manway. They retreated to the gangway and when they returned to the face of the breast with naked lights they ignited the gas in the upcast manway, causing the explosion. Bennan died May 27; Conway, May 28.	
2	John Marchinchook, ----	Slavonian, ----	Miner, ----	51	M.	1					
16	Jeremiah Mahoney, ..	American, ..	Driver, ----	22	S.			Buck Run, ----	Schuylkill, ----		
21	Maier Brozius, ----	Polish, ----	Miler, ----	33	S.			Buck Run, ----	Schuylkill, ----		
22	Daniel Brennan, ----	American, ----	Miner, ----	25	M.	1	1	Otto, ----	Schuylkill, ----		
23	James Conway, ----	American, ----	Miner, ----	28	S.						
29	Martin Egan, ----	American, ..	Jig-runner, ..	16				St. Clair, ----			Fatally injured. Caught by sprocket wheel belt of jig. Died June 16. Outside.
July 20	John Brink, ----	Greek, ----	Laborer, ----	48	M.	1	3	John Veith, ----	Schuylkill, ----		Killed by fall of rock at face of tunnel in No. 2 shaft while removing the drilling machine from one side of the tunnel to the other. The machine had been placed under the piece of rock a short time prior to the accident

July 29	Mike Smotzey,	Lithuanian,	Miner,	35	M.	1	3	Pine Hill,	-----	Fatally injured by fall of top rock while starting loose coal in breast. Died September 17.
Aug. 3	Howell Davis,	Welsh,	Miner,	41	M.	1	4	Pine Hill,	-----	Killed. While he was starting a breast battery, the coal rushed down, discharging a prop which struck him on the head, fracturing his skull.
12	James A. Brennan,	American,	Driver,	18	S.	-----	-----	Glendower,	-----	Killed by fall of rock at bottom of Taysville slope while turning his mule around.
Sept. 14	Edward Brennan,	American,	Topman,	20	S.	-----	-----	Wadesville,	-----	Fatally injured. While riding on front of a mine car ascending Holmes plane, the hissing rope became entangled with the pulley, causing the car to jump the track. Brennan was thrown under the car. Died same day.
24	Steve Kozeol,	Slavonian,	Laborer,	50	M.	1	-----	Oak Hill,	-----	Fatally injured. Squeezed about the body. While he was assisting to dump a culm dumper it moved back on the track, catching him against another dumper. Outside.
Oct. 7	Anthony Benonis, Carl Zivitslanovitch,	Lithuanian, Lithuanian,	Miner, Miner,	30 50	S. M.	1	-----	Phoenix Park,	-----	Fatally burned by explosion of gas. They were driving a heading at the face of the breast when Benonis lighted a fuse with his pipe which ignited the gas that was present in the heading. Benonis died October 17. Zivitslanovitch died in the breast. His burns were not severe enough to cause sudden death and it is supposed that he died from fright. They should not have attempted to fire a blast when gas was present.
12	Joseph Murphy,	American,	Laborer,	19	S.	-----	-----	Phoenix Park,	-----	Killed. While attempting to jump off in front of a moving locomotive, he fell and was run over by it. Outside.
31	John Schun,	American,	Topman,	28	M.	1	-----	Pine Knot,	-----	Killed by falling down No. 2 shaft. He was riding on the front of the truck coming in from the rock bank when the truck wheel struck the edge of the head block, throwing him headlong down the shaft.
Nov. 7	Joe Locke,	Polish,	Driver,	21	S.	-----	-----	Pine Hill,	-----	Fatally injured. Squeezed about the hips. His mule started off before he was ready to go and he was caught between the door and the car.
Dec. 24	Joc Wazzon,	Polish,	Miner,	42	M.	1	4	Lytle,	-----	Killed by rush of coal and gob while robbing gangway stump pillars

TABLE 5.—Non-fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Mine	County	Nature and Cause of Accident in Brief
Jan. 2	Charles Fesko, -----	Slavonian,	Patcher, -----	17	S.	St. Clair, -----		Hand crushed. While trying to pull a chain from under the car wheels, he fell with his hand on the rail and the wheel ran over it.
10	James Loditz, -----	Italian, -----	Laborer, -----	56	M.	Oak Hill, -----		Ribs fractured. The mule started off with the dumper while he was fixing the door latch on it and he was caught between it and another dumper. Outside.
Feb. 7	John Right, -----	Lithuanian,	Miner, -----	45	M.	Wadesville, -----	Schuylkill,	Head and breast injured. He was firing a blast and when he loosened the match of the squib the blast exploded prematurely, striking him.
17	Victor Gatz, -----	Polish, -----	Miner, -----	33	M.	Oak Hill, -----		Body injured by premature blast. He was firing a blast and when he loosened the match of the squib, the blast exploded prematurely, striking him.
April 8	Mike Bahmís, -----	Lithuanian,	Miner, -----	25	S.	Wadesville, -----	Schuylkill,	Face and hands burned by explosion of gas. Bahmís ignited a fuse with a cigarette while gas was at face of chute.
8	John Suesker, -----	Lithuanian,	Laborer, -----	25	S.	Wadesville, -----		Leg fractured. A piece of gangway timber rolled on it at face of gangway.
10	Adam Fritcher, -----	Lithuanian,	Laborer, -----	28	S.	Wadesville, -----		Head injured. While riding on car he bumped against coal chute.
10	William Kotchinski, -----	Lithuanian	Driver, -----	26	S.	Lytle, -----	Schuylkill,	Face and hands burned by gas. On investigation a match box and one charred match were found near face of breast.
May 9	John Miksock, -----	Lithuanian,	Miner, -----	32	S.	Oak Hill, -----	Schuylkill,	Face and hands burned by explosion of gas. Dynamite in blast failed to explode, but part of it flamed or burned in the hole and ignited the gas.
9	Frank Venshik, -----	Lithuanian,	Miner, -----	35	S.			
9	Charles Voloski, -----	Lithuanian,	Miner, -----	27	S.	Phoenix, -----	Schuylkill,	
9	Joseph Kusiak, -----	Lithuanian,	Miner, -----	30	M.			

May 18	Felix Witeoski, -----	Polish, -----	Miner, -----	39	M. Lytle, -----	Schuylkill, -----	Leg fractured by fall of coal near face of gangway.
29	Mike Hulsavage, -----	Polish, -----	Laborer, -----	38	S. Howard, -----	Schuylkill, -----	Hips squeezed. He jumped between cars on slope.
July 30	Daniel Stone, -----	English, -----	Miner, -----	66	M. Mt. Hope, -----		Body injured by fall of coal while driving a heading in breast.
30	Albert Breck, -----	Polish, -----	Miner, -----	24	S. Pine Hill, -----		Coal fell on him and arm fractured. Coal fell on him while he was tamping a hole that had been drilled in the coal.
Aug. 5	Evan Turner, -----	American, -----	Laborer, -----	22	M. John Veith, -----		Spine fractured by a piece of rock that fell on him from rib of tunnel while removing sprag from car wheel.
Sept. 11	Peter Rebereavage, -----	Polish, -----	Miner, -----	25	M. Lytle, -----		Hands and face burned by explosion of gas. While brushing gas he forced the flame through the gauze of the lamp.
Nov. 9	Andrew Stajesky, -----	Russian, -----	Miner, -----	38	M. Lytle, -----		Head and neck injured. While prying down top coal some of it fell on him.
23	Charles Macenus, -----	Slavonian, -----	Runner, -----	18	S. St. Clair, -----		Leg fractured. Run over by car wheel. While placing a block under the wheel he slipped and fell.
25	William Strajlinsky, -----	Slavonian, -----	Miner, -----	30	M. St. Clair, -----		Leg fractured. While he was mining coal a piece of it fell on him.
Dec. 9	Charles Burke, -----	Swedish, -----	Miner, -----	37	M. St. Clair, -----		Leg fractured by piece of coal that fell on him while robbing a pillar.
9	Joe Sepoton, -----	Italian, -----	Laborer, -----	22	S. Wadesville, -----		Hands and face burned by explosion of gas. His miner turned a compressed air hose on the gas to remove it from the gangway face after a blast and forced it down on Sepoton's exposed light.
19	Mike Tokash, -----	Slavonian, -----	Miner, -----	26	S. St. Clair, -----		Leg fractured. While he was prying down a piece of coal it fell on him.
22	Anthony Smith, -----	Lithuanian, -----	Miner, -----	36	M. Lytle, -----		Leg fractured. A piece of coal burst from high side of heading and struck him on the leg.
23	Frank Perick, -----	Slavonian, -----	Miner, -----	35	M. Glendower, -----		Leg fractured. While working at face of breast a piece of top coal fell on him.

CONDITION OF COLLIERIES

PHILADELPHIA AND READING COAL AND IRON COMPANY

Wadesville.—Ventilation and drainage good.

Phoenix Park.—Ventilation and drainage good.

Otto Colliery.—Ventilation and drainage good.

Glendower.—Ventilation in west end fair; in remainder of colliery good; drainage good.

Pine Knot.—Ventilation and drainage good.

John Veith.—Ventilation and drainage good.

ST. CLAIR COAL COMPANY

St. Clair.—Ventilation good; drainage fair.

LYTLE COAL COMPANY

Lytte.—Ventilation fair; drainage good, except in No. 4 lift west where it is fair.

PINE HILL COAL COMPANY

Pine Hill.—Ventilation fair; drainage fair, except in West Skidmore drift where it is bad.

OAK HILL COAL COMPANY

Oak Hill.—Ventilation fair; drainage fair, except in No. 3 level which is in bad condition.

BUCK RUN COAL COMPANY

Buck Run.—Ventilation and drainage fair.

MT. HOPE COAL COMPANY

Mt. Hope.—Ventilation and drainage fair.

JOHN H. DAVIS COMPANY

Ellsworth.—Ventilation and drainage good.

E. WHITE AND COMPANY

Howard.—Ventilation and drainage fair.

SALEM HILL COAL COMPANY

Salem.—Ventilation and drainage fair.

IMPROVEMENTS

PHILADELPHIA AND READING COAL AND IRON COMPANY

Wadesville Colliery.—The tunnel mentioned in last year's report from the Orchard to the Big Diamond vein has been completed 70 yards to the Little Diamond vein.

The new lift is being turned off from the Skidmore plane.

A tunnel, 310 feet long, has been completed from the East Skidmore, 1st lift Skidmore plane level, to old Wadesville Shaft Bottom Split workings.

The East Top Split workings, 1st lift Skidmore plane, have been connected with Beechwood old workings.

An air hole is now being driven on the Top Split, East, shaft level to bottom of Old Saint Clair shaft, now up 555 feet.

A tunnel has been completed from Skidmore to the Seven Foot vein a distance of 80 feet.

A slope is now being sunk on the Primrose vein from the surface.

LYTLE COAL COMPANY

Lytle Colliery, Inside.—Completed sinking the Orchard slope, 194 feet, making a total depth of 580 feet, also the following tunnels:

3rd Level.—Tunnel from Holmes to Primrose, 85 feet.

5th Level.—Tunnel from North Dip Primrose to Holmes, 157 feet.

Tunnel from West Skidmore to Black Heath, 24 feet.

Air tunnel, East Holmes to Four Foot, 45 degrees pitch, 19 feet.

Air tunnel, East Four Foot to White Ash, 45 degrees pitch, 39 feet.

6th Level.—Tunnel North from North Dip Orchard gangway, 70 feet.

Tunnel South from North Dip Orchard gangway, 120 feet.

Outside. A new 20-foot fan built of concrete and iron has been erected at the old White Ash slope to ventilate the east side workings of the 4th and 5th levels.

PINE HILL COAL COMPANY

Pine Hill Colliery.—Shaft. Tunnel driven on the Second Level East to cut the Black Heath and the Bottom Split of the Red Ash; all in old workings. Total amount driven, 92 feet. Tunnel not yet finished.

Drift. A new underground slope is being sunk in the drift on the Buck Mountain vein. Slope is to go down 2 lifts. Total distance sunk, 170 feet. Slope unfinished.

Outside. One electric hoist installed November 11, equipped with 2 G. E. motors, 80 H. P. each; speed of motors, 450 revolutions per minute. This electric hoist will be used to hoist coal from the underground slope that is being sunk in the drift. The electric hoist is situated on the surface 6,500 feet from the colliery.

OAK HILL COAL COMPANY

Oak Hill Colliery.—An 8 foot exhaust fan installed on the Buck Mountain vein, Upper drift level.

An 18 x 9 x 24 inch Single Goyne pump installed in 5th level at shaft.

Two 500 horse power Maxim boilers erected.

A new 10 x 14 inch Porter locomotive placed on dirt bank.

A new pair of hoisting engines installed at No. 2 Slope, size 12 x 12 inches, double cylinders.

A slope driven out to the surface of the Mine Hill Mountain on the Black Heath vein. Two lifts will be made on this slope and the coal hoisted from the old workings in the Hill basin from which water was removed last year by pumping.

West White Ash and Black Heath in No. 1 drift are being reopened.

BUCK RUN COAL COMPANY

Buck Run Colliery.—Finished sinking underground slope on South Dip Daniel vein from third to fourth level, a distance of 265 feet.

Turned off fourth level and started a double track tunnel from South to North Dip across the basin. This tunnel is a distance of 40 feet.

DARKWATER COAL COMPANY

New Castel Colliery.—Tunnel driven from Skidmore vein, South Dip between first and second level, to Mammoth vein, South Dip, a distance of 115 feet. When this tunnel was in 92 feet, erected diamond drill and drilled hole $1\frac{3}{8}$ inches in diameter, a distance of 23 feet to the water in the Old Mammoth gangway. They drilled 14 holes 2 inches in diameter and 4 holes 5 inches in diameter, a distance of 23 feet, to take the water out of the old workings. After the water stopped running out of the holes they started the tunnel to the South Dip, Crosby, a distance of 150 feet, from South to North Dip Crosby, a distance of 187 feet, making a tunnel of 452 feet.

Breaker has not worked during year.

MINE FOREMEN'S EXAMINATIONS

The annual examination of applicants for certificates of qualification as Mine Foremen and Assistant Mine Foremen was held in Union Hall, Pottsville, June 19 and 20. The Board of Examiners was composed of the following persons: Michael J. Brennan, Inspector, Pottsville, Arthur Kennedy, Superintendent, Minersville; Charles Larkin, Miner, Branchdale; Pierce Grace, Miner, Glen Carbon, and Edward Ryan, Clerk, Mackeysburg.

The following persons passed a satisfactory examination and were granted certificates:

Mine Foremen

James McGrath and John Crone, Minersville; James Burns, St. Clair; Charles Gleason, Port Carbon; Andrew Dutter, Duncott.

Assistant Mine Foremen

Thomas Boran, Thomas O'Neill, John C. Buchanan, John H. Parnell, John Nevilles and Horace Dolbin, Minersville; Michael Purcell, James Brennan and Michael Sweeney, Duncott; Patrick Maley, David Bowers and James Dolan, Glen Carbon; Edward Curran, Heckscher-ville, Patrick H. Brennan, Pottsville, William Powell, Llewellyn.



Twentieth District

SCHUYLKILL AND DAUPHIN COUNTIES

Lykens, Pa., February 27, 1909.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor to transmit herewith my annual report as Inspector of Mines of the Twentieth Anthracite District for the year ending December 31, 1908. The report contains the statistical information as required by law, also a brief description of the fatal and non-fatal accidents that occurred during the year.

Respectfully submitted,

CHARLES J. PRICE, Inspector.

SUMMARY OF STATISTICS

Number of collieries,	6
Number of mines,	27
Number of mines in operation,	23
Number of tons of coal shipped to market,	1,950,228
Number of tons used at mines for steam and heat,	316,426
Number of tons sold to local trade and used by employes,	38,936
Number of tons produced,	2,305,590
Number of tons produced by compressed air machines, ..	—
Number of tons produced by electrical machines,	—
Number of persons employed inside of mines,	4,237
Number of persons employed outside,	1,812
Number of fatal accidents inside of mines,	18
Number of non-fatal accidents inside of mines,	32
Number of non-fatal accidents outside,	13
Number of tons of coal produced per fatal accident inside, ..	128,088
Number of persons employed per fatal accident inside, ...	235
Number of persons employed per non-fatal accident inside, ..	132
Number of persons employed per non-fatal accident outside, ..	139
Number of wives made widows,	10
Number of children orphaned,	32
Number of steam locomotives used inside of mines,	1
Number of steam locomotives used outside,	16
Number of electric motors used inside,	15
Number of electric motors used outside,	2
Number of fans in use,	21
Number of gaseous mines in operation,	20
Number of non-gaseous mines in operation,	3
Number of new mines opened,	1

TABLE A

PRODUCTION OF COAL

Names of Operators	Tons
Philadelphia and Reading Coal and Iron Company,	1,339,520
Summit Branch Mining Company,	757,147
Lehigh Valley Coal Company,	139,054
Lorberry Coal Company,	69,869
	<hr/>
Total,	2,305,590
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Production by Counties

Schuylkill,	1,548,443
Dauphin,	757,147
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Total,	2,305,590
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TABLE I.—Fatal and non-fatal accidents inside and outside of mines; number of tons of coal produced per accident; number of persons employed; number employed per accident

Names of Operators	Fatal Accidents			Non-fatal Accidents			Tons of coal produced per fatal accident inside	Tons of coal produced per non-fatal accident inside	Number of employees inside	Number of employees outside	Total number of employees	Number of employees inside per fatal accident	Number of employees outside per fatal accident	Number of employees inside per non-fatal accident	Number of employees outside per non-fatal accident
	Inside	Outside	Total	Inside	Outside	Total									
Philadelphia and Reading Coal and Iron Co.,	7	14	21	11	3	14	191,360	121,774	2,345	833	3,178	335	---	213	278
Summit Branch Mining Co.,	9	26	35	16	10	26	84,127	47,322	1,481	813	2,294	165	---	93	81
Lehigh Valley Coal Co.,	2	5	7	5	2	7	69,527	27,811	411	196	587	205	---	82	---
Lorberry Coal Co.,	---	---	---	---	---	---	---	---	---	40	40	---	---	---	---
Totals and averages for district,	18	45	63	32	13	45	128,088	72,050	4,287	1,812	6,049	235	---	132	139

TABLE C.—Classification of Fatal Accidents Inside and Outside of Mines

	Months												Totals	Percentages	
	January	February	March	April	May	June	July	August	September	October	November	December			
Causes of Accidents Inside															
Falls of coal, -----		1												1	5.55
Falls of slate, -----		1						1					1	3	16.67
Falls of roof, -----									1				1	2	11.12
Mine cars, -----		1	2				1							4	22.23
Explosions of powder and dynamite, -----							6							6	33.33
Falling into slopes, etc., -----									1					1	5.55
Miscellaneous, -----								1						1	5.55
Totals, -----		3	2				7	2	2		1	1	18	100.00	
Causes of Accidents Outside															
Grand totals inside and outside, -----		3	2				7	2	2		1	1	18	100.00	

TABLE D.—Classification of Non-fatal Accidents Inside and Outside of Mines

	Months												Totals	Percentages	
	January	February	March	April	May	June	July	August	September	October	November	December			
Causes of Accidents Inside															
Falls of coal, -----				1							1	1	3	9.37	
Falls of slate, -----	1					1	1				1	1	7	21.83	
Mine cars, -----					2	1			1		1		5	15.63	
Explosions of powder and dynamite, -----	1						4						5	15.62	
Premature blasts, -----				1							2	1	4	12.50	
Falling into slopes, etc., -----			1	1	1	1			1				5	15.63	
Mules, -----								1					1	3.12	
Miscellaneous, -----	1					1							2	6.25	
Totals, -----	3		1	3	3	4	5	1	4		5	3	32	100.00	
Causes of Accidents Outside															
Cars, -----						2					2	1	5	38.46	
Machinery, -----	1		1						1				3	23.08	
Miscellaneous, -----	1	1	1		1			1					5	38.46	
Totals, -----	2	1	2		3			1	1		2	1	13	100.00	
Grand totals inside and outside, -----	5	1	3	3	6	4	5	2	5		7	4	45		

TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												Totals	
	January	February	March	April	May	June	July	August	September	October	November	December		
Inside														
Miners, -----		2					6	2	2			1	1	13
Miners' laborers, -----			1									1		3
Drivers and runners, -----		1						1						1
All other employes, -----			1											1
Totals, -----		3	2				7	2	2			1	1	18
Grand totals inside and outside, -----		3	2				7	2	2			1	1	18

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

	Months												Totals	
	January	February	March	April	May	June	July	August	September	October	November	December		
Inside														
Assistant mine foremen, -----							1							1
Miners, -----	2		1	3	1	3	2		3		2	3		20
Miners' laborers, -----							1				2			3
Drivers and runners, -----								1			1			2
Company men, -----	1				2	1								4
All other employes, -----							1		1					2
Totals, -----	3		1	3	3	4	5	1	4		5	3		32
Outside														
Blacksmiths and carpenters, -----		1												1
Slatepickers (boys), -----	1								1					2
All other employes, -----	1		2		3			1			2	1		10
Totals, -----	2	1	2		3			1	1		2	1		13
Grand totals inside and outside, -----	5	1	3	3	6	4	5	2	5		7	4		45

TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
American, -----		2	1				5	2	2		1	1	14
English, -----		1											1
Irish, -----							2						2
Slavonian, -----			1										1
Totals, -----		3	2				7	2	2		1	1	18

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
American, -----	5	1	1	1	5	2	3	2	5		7	4	36
English, -----				1			1						2
Irish, -----							1						1
German, -----				1									1
Polish, -----			1										1
Italian, -----			1										1
Slavonian, -----					1	1							2
Lithuanian, -----						1							1
Totals, -----	5	1	3	3	6	4	5	2	5		7	4	45

TABLE I.—Operators and mines, kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents, number of persons employed inside

Names of Operators and Mines	Kind of opening	Gaseous or non-gaseous	Method of ventilation	Diameter of fan in feet	Width of blades in feet	Depth of blades in feet	Number of revolutions per minute	Water gauge developed—inches	Name of fan	Power used	Number of splits of air currents	Number of cubic feet of air per minute entering the mine at inlet	Total quantity of air per minute circulating in all the splits in cubic feet	Number of cubic feet per minute passing out at outlet	Number of persons employed inside
Philadelphia and Reading Coal and Iron Co.															
Lincoln Colliery:															
Lincoln No. 1, -----	Slope, ---	Gaseous, ---	Fans, ----	{ 16	4.5	3.8	85	1.2	{ Guibal, --	{ Steam, ---	44	275,000	270,000	281,000	1,054
Lincoln No. 2, -----	Slope, ---	Gaseous, ---	Fan, ----	18	6	5.3	85	1.5	{ Guibal, --	{ Steam, ---					
Lincoln No. 3, -----	Slope, ---	Gaseous, ---	Fan, ----	12	4	3.4	110	1.2	{ Guibal, --	{ Steam, ---					
Brookside Colliery:															
Brookside No. 1, -----	Slope, ---	Gaseous, ---	Fan, ----	18	6	5	82	1.5	{ Guibal, --	{ Steam, ---	20	216,000	214,000	219,000	824
Brookside No. 4, -----	Slope, ---	Gaseous, ---	Fan, ----	18	6	5	90	1.1	{ Guibal, --	{ Steam, ---					
Brookside Shaft, -----	Shaft, ---	Gaseous, ---	Fan, ----	21	7	6	73	1.9							
Tender Slope, -----	Slope, ---	Gaseous, ---	Fan, ----	14	4.5	3.5	74	.9							
Good Spring Colliery:															
Good Spring No. 1, -----	Slope, ---	Gaseous, ---	Fan, ----	18	6	5	90	1.1	{ Guibal, --	{ Steam, ---	17	176,000	164,000	179,000	487
Good Spring No. 2,* -----	Slope, ---	Gaseous, ---	Fan, ----	18	6	5	80	1.1	{ Guibal, --	{ Steam, ---					
Good Spring No. 3, -----	Slope, ---	Gaseous, ---	Fan, ----	18	6	5	80	.7							
L. V. Tunnel, -----	Tunnel, --	Gaseous, ---	Fan, ----	15	5	3.5	45	.7							

*No. 2 slope used as a tender slope.

Lehigh Valley Coal Co.																
Blackwood Colliery:																
Woods,	Tunnel, --	Gaseous,	Fan, ----	20	6	5.9	90	1.2	} Guibal, --	Steam, ---	20	153,190	144,000	154,250	411	
Dundas,	Tunnel, --	Gaseous,	Fan, ----	12	4	3	100	.3								
Number 4,	Tunnel, --	Gaseous,	Natural,													
Summit Branch Mining Co.																
Short Mountain Colliery:																
Drift No. 1,	Drift, ---	Non-gas,	Natural,													
Drift No. 2,	Drift, ---	Non-gas,	Natural,	25	8	7	60	1.4	Guibal, --	Steam, ---	18	194,000	169,400	198,000	4214	
Short Mountain,	Slope, ---	Gaseous,	Fan, ----						Guibal, --	Steam, ---					1640	
Jykens Valley,	Slope, ---	Gaseous,	Fan, ----	16	4	4	60	.7	Guibal, --	Steam, ---						
Bear Gap,	Slope, ---	Gaseous,	Fan, ----	25	8	7	60	1.3	Guibal, --	Steam, ---						
Underground No. 4,	Slope, ---	Gaseous,	Fan, ----													
Williamstown Colliery:																
Big Lick,	Slope, ---	Gaseous,	Fan, ----	8												
Number 3,	Slope, ---	Gaseous,	Fan, ----	25	8	7	45	.9								
Bear Valley,	Slope, ---	Gaseous,	Fan, ----	14	4	3.5	68	.8								
Shaft No. 1,	Shaft, ---	Gaseous,	Fan, ----	25	8	7	60	1.1	Guibal, --	Steam, ---	19	164,000	159,000	168,000	452	
Shaft No. 2,	Shaft, ---	Gaseous,	Fan, ----	23	8	7	45	.9							4575	
Summit,	Slope, ---	Gaseous,	**													

†Night.

‡Day.

§Pushed full of culm at present.

**Used as a tender slope.

TABLE 1.—Operators, location of collieries, railroads, etc.

Names of Operators and Collieries	County	Name of General Superintendent	Post Office	Name of Superintendent	Post Office	Railroad	Mitter
Philadelphia and Reading Coal and Iron Co.							
Lincoln	Schuylkill,	Reese Tasker,	Pottsville,	E. E. Kaercher, Division Supt.	Pottsville,	P. and R.	
Brookside				John Lorenz, In- side Supt.	Tremont,		
Good Spring,				Joseph H. Lee, Outside Supt.	Tremont,		
Valley View,							
Ransch Creek Washery,							
Middle Creek Washery,							
Summit Branch Mining Co.							
Short Mountain,	Dauphin,	Robert A. Qulin,	Wilkes-Barre,	William Anman, Michael Readdy, Inside Supt.	Lykens,	Pennsylvania	
Williamstown,							
Short Mountain Washery,							
Williamstown Washery,							
Big Lick Washery,							
Lehigh Valley Coal Co.	Schuylkill,	S. D. Warriner,	Wilkes-Barre,	Wm. Underwood,	Blackwood,	Lehigh Valley	
Blackwood,							
Lorberry Coal Co.	Schuylkill,	George Warnke,	Pine Grove,			P. and R.	
Lorberry Washery,							

TABLE 2.—Number of tons of coal mined, number of days worked, number of persons employed, number killed and injured, quantity of powder and dynamite used, etc.

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Number of kegs of powder used	Number of pounds of dynamite used	Number of horses and mules
Philadelphia and Reading Coal and Iron Co.	Schuylkill, -----	416,297	38,154	7,904	462,895	257	1,285	3	7	8,738	42,157	128
Lincoln, -----		300,284	49,150	5	349,462	263	1,053	3	6	2,878	43,551	124
Brookside, -----		250,049	61,540	6,155	317,744	263	649	1	1	2,054	90,841	65
Good Spring, -----				172	102		30				14,300	1
Valley View, -----			960,630	18,884	14,249	1,129,763		3,017	7	14	13,670	190,840	318
Rausch Creek, -----	Schuylkill, -----	140,541	5,105		145,706	191	82				10	
Middle Creek, -----		55,319	2,283	2,3	64,051	145	79				15	3
Washeries		196,060	13,418	275	909,757		161				25	3
Totals, -----		1,162,690	162,302	14,528	1,338,519		3,178	7	14	13,670	190,874	321
Summit Branch Mining Co.	Dauphin, -----	290,854	38,107	16,423	344,884	262	1,157	1	10	4,268	22,200	145
Short Mountain, -----		178,575	95,915	6,021	280,511	949	1,014	8	16	3,422	71,165	91
Williamstown, -----		468,929	134,022	22,444	625,395		2,171	9	26	7,690	95,365	236

TABLE 2.—Continued

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Number of kegs of powder used	Number of pounds of dynamite used	Number of horses and mules
Summit Branch Mining Co.—Continued. Washeries												
Short Mountain, -----	Dauphin, -----	120,302	2,024	902	123,128	409	31					
Williamstown, -----		3,122	2,388		5,510	24	62					
Big Lick, -----		1,309	1,785	20	3,114	23	27					
Totals, -----		124,633	6,197	922	131,752		123					
Lehigh Valley Coal Co.		593,562	140,219	23,366	757,147		2,294	9	26	7,050	93,305	236
Blackwood, -----	Schuylkill, -----	129,107	8,905	1,042	139,054	136	537	2	5	1,280	92,889	12
Lorberry Washery, -----	Schuylkill, -----	64,869	5,000		69,869	200	40					2
Grand totals, -----		1,950,228	316,426	38,936	2,305,590	238	6,049	18	45	22,640	377,128	571

TABLE 2.—Part 2.

Names of Operators	County	Number of Boilers				Locomotives			Number of steam engines of all classes	Total horse power	Number of pumps delivering water to surface	Capacity in gallons per minute	Quantity delivered to surface per minute—gallons	Number of electric dynamos	Number of air compressors
		Cylindrical	Horse power	Tubular	Horse power	Total horse power	Steam	Air								Electric
Philadelphia and Reading Coal and Iron Co.,	Schuykill,	21	1,470	65	9,085	10,555	8	---	76	21,116	12	14,200	5,241	4	3
Sunmit Branch Mining Co.,	Dauphin,	15	830	108	11,840	12,670	5	---	125	11,688	9	8,680	8,123	3	2
Lehigh Valley Coal Co.,	Schuykill,	---	---	11	1,600	1,600	4	---	14	---	---	---	---	1	1
Lorberry Coal Co.,	Schuykill,	---	---	4	400	400	---	---	---	---	---	---	---	---	---
Totals,	---	57	2,300	188	22,925	23,225	17	17	.15	32,804	21	22,880	8,364	8	6

TABLE 3.—Number of each class of employes inside and outside of mines

Names of Operators and Collieries	County	Inside										Outside						Grand total inside and outside					
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Doorboys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Foremen	Blacksmiths and carpenters	Engineers and firemen	State pickers (boys)		State pickers (men)	Bookkeepers and clerks	All other employes	Total outside	
Philadelphia and Reading Coal and Iron Co.	Schuylkill,	2	13	---	297	105	71	11	---	181	314	1,054	---	2	14	33	29	11	4	138	231	1,285	
Lincoln, -----		3	16	---	160	61	40	14	1	164	365	824	---	3	15	41	25	5	4	136	229	1,053	
Brookside, -----		2	9	---	154	64	14	13	4	61	116	437	---	3	10	27	25	6	3	138	212	649	
Good Spring, -----		---	---	---	1	20	---	---	---	1	8	30	---	---	---	---	---	---	---	---	---	---	30
Valley View, -----		7	38	---	612	310	125	38	5	407	803	2,345	---	8	39	101	79	22	11	412	672	3,017	
Washeries Rausch Creek, ----- Middle Creek, -----	Schuylkill,	---	---	---	---	---	---	---	---	---	---	---	---	1	3	5	4	---	1	68	82	82	
---	---	---	---	---	---	---	---	---	---	---	---	---	---	1	3	5	4	---	1	65	79	79	
---	---	---	---	---	---	---	---	---	---	---	---	---	---	2	6	10	8	---	2	133	161	161	
Totals, -----	---	7	38	---	612	310	125	38	5	407	803	2,345	---	10	45	111	87	22	13	545	833	3,178	
Summit Branch Mining Co. Short Mountain, ----- Williamstown, -----	Dauphin,	1	4	8	297	103	97	17	17	259	51	854	1	1	20	40	65	2	7	167	303	1,157	
---	---	2	4	5	235	47	37	2	8	47	240	627	1	2	14	69	43	---	5	253	387	1,014	
---	---	3	8	13	532	150	134	19	25	306	291	1,481	2	3	34	109	108	2	12	450	690	2,171	

Washeries		Dauphin,										22		34	
Short Mountain,	Williamstown,	1	1	8	2	4	48	126	108	6	12	507	813	2,294	
Big Lick,		13	4	5											
		1	14	17						4		87	123	123	
Totals,		3	8	13	532	150	134	19	25	306	291	1,481			
Lehigh Valley Coal Co.															
Blackwood,		3	6	235	65	12	6		84		411				
Lorberry Coal Co.															
Lorberry Washery,															
Grand totals,		13	52	13	1,379	525	271	63	30	797	1,094	4,237			
		17	102	260	204	32	30	1,163	1,812	6,049					

TABLE 3.—Part 2

Names of Operators and Collieries	County	Number of Days Worked in Breaker												Total				
		January	February	March	April	May	June	July	August	September	October	November	December					
Philadelphia and Reading Coal and Iron Co.																		
Lincoln,	Schuylkill,	25	23	16	23	23	23	18	17	20	22	23	24	257				
Brookside,		25	23	15	23	24	23	19	17	22	25	22	25	263				
Good Spring,		25	23	15	23	24	23	19	17	21	25	23	25	263				
Summit Branch Mining Co.																		
Short Mountain,	Dauphin,	23	19	22	22	21	23	24	20	21	23	21	23	262				
Williamstown,		22	17	20	19	20	23	20	21	21	22	21	21	247				
Lehigh Valley Coal Co.																		
Blackwood,	Schuylkill,	25	16	11	21	24	19	8	5	-----	-----	7	-----	136				

TABLE 4.—Fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Mine	County	Nature and Cause of Accident in Brief
Feb. 5	Thomas Butler, -----	American,-----	Driver, -----	19	S. -----			Williamstown, -----	Dauphin,-----	Fatally injured. Caught between mine car and high side leg. He was trying to change the spreader on a loaded car from the side hook to the center, and in doing so his body protruded over the side of the car and was caught and squeezed. Died February 8.
11	Henry Savage, -----	English,-----	Miner, -----	38	M. 1	9		Brookside, -----	Schuylkill,-----	Instantly killed by fall of bony coal in No. 4 vein, No. 4 level. At the time of the accident he was robbing pillars on the low side of the heading. A small piece of coal fell from the high side and crushed his head.
11	Reuben Keefer, -----	American,-----	Miner, -----	47	M. 1	3		Lincoln, -----	Schuylkill,-----	Instantly killed by fall of slate on the 6th lift, No. 2 vein east. He had come down from the top bench, where he had been working, and was sitting watching his partner but the coal in chute, when a piece of slate fell on him and broke his neck.
March 3	Raymond Huth, -----	American,-----	Motorman, --	19	S. -----			Blackwood, -----	Schuylkill,-----	Instantly killed by falling under motor. On the way out of the mine one end of the casing of the motor dropped, catching the point of a frog, and the jar threw Huth in front of the motor and it ran over him.
4	George Holdsmick, ---	Slavonian, ---	Laborer, -----	23	S. -----			Brookside, -----	Schuylkill,-----	Fatally injured while loading cars. Having loaded his cars he stood on the high side to allow the driver to bump the cars together. As the trip passed out Holdsmick was caught between the last car and high side leg and squeezed.

TABLE 4.—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Mine	County	Nature and Cause of Accident in Brief
July 15	James T. Bowman,	American,	Miner,	31	M.	1	2	Williamstown,	Dauphin,	These six men lost their lives as the result of an explosion of powder. Reilly and Whittle were suffocated by the ventilation being cut off. Hawk was killed by a flying plank. Stakem and Eickert were burned and crushed. Bowman died from heart failure after he had reached a point of safety.
15	Arthur Hawk,	American,	Miner,	26	M.	1	2			
15	Michael Stakem,	Irish,	Miner,	38	M.	1	5			
15	Charles Eickert,	American,	Miner,	28	M.	1	2			
15	John W. Reilly,	American,	Miner,	36	S.					
15	John J. Whittle,	American,	Miner,	53	M.	1	4			fatally injured while tending door. He was tending door temporarily and had opened the door to allow a motor to pass. The motorman told him another motor was following with a loaded trip, but Murray evidently did not understand and was in the act of closing the door when the trip struck it and knocked him down, injuring him so badly that he died before he could be taken to the surface.
22	John Murray,	Irish,	Laboret,	57	S.			Blackwood,	Schuylkill,	Fatally injured by fall of slate in Breast No. 4, 3rd lift. He had been told that a piece of loose slate was hanging at the face and was advised to take it down before starting to work, but did not do so. Died August 6.
Aug. 4	Frank Nagle,	American,	Miner,	56	M.	1		Lincoln,	Schuylkill,	Smothered by coal and gas. While driving a chute up the center of the pillar an outburst of coal and gas occurred, knocking him down the chute, where he died before help could reach him.
26	Edward Bechtel,	American,	Miner,	26	M.	1	2	Brookside,	Schuylkill,	

Sept. 17	William Ditzlow, -----	American,--	Miner, -----	44	M. 1	3	Lincoln, -----	Schuylkill, -----	<p>Leg fractured by a piece of rock that slipped out of the high side of the gangway he was driving. Gangrene set in and he died September 30. Instantly killed by being knocked down the manway of his breast in Bear Valley slope. He and his brother had charged a hole over the downcast manway and lit the fuse and had retreated to a heading on the downcast side to await the explosion. When the shot was fired the smoke came down on them so thick that they left the manway and started down to the main heading. A rush of coal from the face came down the manway knocking them both down into the chute, and Claude Higgins was killed.</p> <p>Fatally injured by fall of rock in his working place. The place had been examined and was thought safe. He died the same day.</p> <p>Instantly killed by fall of slate at face of his breast. He had fired a shot in the center of the breast and after sounding the top started to dress off the shot, when the top slate fell on him.</p>
28	Claude Higgins, -----	American,--	Miner, -----	23	S. -----	-----	Williamstown, -----	Dauphin,-----	
Nov. 4	Edwin L. Harner, -----	American,--	Laborer, -----	17	S. -----	-----	Short Mountain, --	Dauphin,-----	
Dec. 16	David Leininger, -----	American,--	Miner, -----	21	S. -----	-----	Good Spring, -----	Schuylkill, -----	

TABLE 5.—Non-fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Mine	County	Nature and Cause of Accident in Brief
Jan. 15	Samuel Uhler, -----	American,--	Laborer, -----	56	M.	Brookside, -----	Schuylkill,-----	Leg fractured. Rock rolled on it. Outside.
17	Edward A. Wenrich,--	American,--	Miner, -----	24	M.	Lincoln, -----	Schuylkill,-----	Arms, back and face severely burned by explosion of powder.
20	John C. Knley, -----	American,--	Miner, -----	55	M.	Short Mountain,-----	Dauphin,-----	Ribs fractured and body injured internally by fall of slate.
22	Patrick Campbell, ----	American,--	Timberman, -----	66	M.	Lincoln, -----	Schuylkill,-----	Ankle fractured. Prop that he was carrying fell on it.
24	Harry Culbert, -----	American,--	Slatepicker, -----	15	S.	Lincoln, -----	Schuylkill,-----	Leg broken while playing with wheel of rope drive. Outside.
Feb. 15	Charles D. Klinger, --	American,--	Carpenter, -----	22	S.	Williamstown, -----	Dauphin,-----	Head cut and body badly bruised. Fell from shaft tower. Outside.
Mar. 10	Charles Antohols, ---	Italian, ---	Miner, -----	40	M.	Blackwood, -----	Schuylkill,-----	Badly shocked and body bruised. Fell down manway.
26	Theo. Marcovak, ----	Polish, ---	Laborer, -----	25	S.	Williamstown, -----	Dauphin,-----	Hand lacerated. Caught in conveyor line. Outside.
31	William Bonawitz, ---	American,--	Laborer, -----	58	M.	Short Mountain,-----	Dauphin,-----	Leg broken. Fell from platform. Outside.
April 14	John H. Bell, -----	English,---	Miner, -----	24	M.	Williamstown, -----	Dauphin,-----	Head and body badly bruised. Fell down manway.
16	Herman Hentz, -----	German, ---	Miner, -----	59	M.	Brookside, -----	Schuylkill,-----	Face and body badly cut and burned by premature blast.
17	John Werner, -----	American,--	Miner, -----	30	S.	Blackwood, -----	Schuylkill,-----	Shoulder dislocated and arm fractured by fall of coal.
May 6	William D. Michael, --	American,--	Trackman, -----	33	M.	Williamstown, -----	Dauphin,-----	Calf of leg severely bruised between bumpers of cars. Outside.
12	Lester Mumma, -----	American,--	Laborer, -----	18	S.	Short Mountain,-----	Dauphin,-----	Body badly scalded by steam and water from exhaust of breaker engine. Outside.
15	John Kolosky, -----	Slavonian,-----	Miner, -----	24	S.	Blackwood, -----	Schuylkill,-----	Skull fractured. Fell down manway.

May	19	H. J. Shoemaker,	American,	Footman,	31	S.	Short Mountain,	Dauphin,	Internally injured. Fell under mine ears. Outside.
	21	Edward Barr,	American,	Loader,	52	M.	Lincoln,	Schuylkill,	Shoulder and breast injured. Caught between mine car and platform.
	26	Robert Krels,	American,	Loader,	20	S.	Good Spring,	Schuylkill,	Leg fractured. Caught between mine cars.
June	1	Michael Cleary,	American,	Miner,	32	M.	Lincoln,	Schuylkill,	Ribs fractured and body injured internally. Caught between floor of man-trunk and shaft timbers.
	4	Peter Zelsroek,	Lithuanian,	Miner,	27	S.	Brookside,	Schuylkill,	Leg fractured by fall of slate.
	11	Michael Creel,	Slavonian,	Miner,	28	M.	Blackwood,	Schuylkill,	Skull slightly fractured and scalp wounded. Fell down manway.
	12	Lee Culbert,	American,	Loader,	20	S.	Brookside,	Schuylkill,	Leg broken. Caught between mine car and door frame.
July	15	Harper Finley,	American,	Fan-boy,	17	S.	Williamstown,	Dauphin,	Finley and Hepler burned and Parker and Meinhardt bruised and shocked by an explosion of powder, which caused the death of six other men.
	15	Charles Hepler,	American,	Miner,	40	M.	Williamstown,	Dauphin,	Laceration of head and body and contusion of leg by fall of slate.
	15	Charles E. Parker,	English,	Asst. foreman,	32	M.	Williamstown,	Schuylkill,	Collar bone broken. Fell on dirt bank. Outside.
	15	William Meinhardt,	American,	Laborer,	25	M.	Blackwood,	Schuylkill,	Kicked on wrist and in stomach and injured internally by mule.
	16	M. Birmingham,	Irish,	Miner,	43	M.	Blackwood,	Schuylkill,	Right leg fractured by fall of slate. Ribs fractured and body internally injured by fall of slate.
Aug.	18	Harry Spatz,	American,	Repairman,	47	M.	Short Mountain,	Dauphin,	Arm fractured, elbow dislocated and two ribs broken. Fell into conveyor line. Outside.
	18	George Oplinger,	American,	Driver,	21	S.	Short Mountain,	Dauphin,	Let foot and groin lacerated. Caught by mine cars.
Sept.	2	James G. Thomas,	American,	Miner,	52	M.	Short Mountain,	Dauphin,	Concussion of brain and body badly bruised. Fell down manway.
	11	John Snyder,	American,	Miner,	57	M.	Lincoln,	Schuylkill,	Head and body bruised and cut by coal from premature blast.
	11	Terrence Leonard,	American,	Slatepicker,	16	S.	Brookside,	Schuylkill,	Head badly lacerated and concussion of brain by coal from premature blast.
	26	John Stroup,	American,	Footman,	23	M.	Short Mountain,	Dauphin,	Hand bruised and lacerated by mine cars. Outside.
	28	John Higgins,	American,	Miner,	33	M.	Williamstown,	Dauphin,	Collar bone broken and body bruised. Caught between mine car and hauling chain at breaker thy. Outside.
Nov.	10	John L. Flinn,	American,	Miner,	29	M.	Williamstown,	Dauphin,	Back, hips and right leg bruised by fall of slate.
	10	Warren H. Sowers,	American,	Miner,	37	M.	Williamstown,	Dauphin,	Let arm badly bruised and torn. Caught between top of car and low collar.
	12	Charles McSurdy,	American,	Car-blocker,	35	S.	Williamstown,	Dauphin,	Jaw and nose broken and head, arm and face cut by fall of coal.
	13	Edward Punch,	American,	Car-oller,	18	S.	Williamstown,	Dauphin,	
	23	Charles Stanley,	American,	Laborer,	30	M.	Short Mountain,	Dauphin,	
	25	James Kelly,	American,	Driver,	28	S.	Short Mountain,	Dauphin,	
	27	Ray Gamber,	American,	Laborer,	20	M.	Brookside,	Schuylkill,	

TABLE 5.—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Mine	County	Nature and Cause of Accident in Brief
Dec. 1	Joseph Kinsey,	American,	Miner,	23	S.	Williamstown,	Dauphin,	Back injured by fall of slate. Finger broken and hand badly lacerated by mine cars. Outside. Right leg fractured by fall of coal. Head and face cut by flying debris from premature blast.
8	John Gafney,	American,	Car-blocker,	16	S.	Williamstown,	Dauphin,	
19	John Schliski,	American,	Miner,	32	M.	Williamstown,	Dauphin,	
21	Chas. F. Miller,	American,	Miner,	26	S.	Lincoln,	Schuylkill,	

EXPLOSION AT WILLIAMSTOWN COLLIERY

On July 15 an explosion of powder and gas occurred at the Williamstown Colliery and as the result six men lost their lives. The persons killed were James T. Bowman, Arthur Hawk, Michael Stakem, Charles Rickert, John W. Reilly and John J. Whittle, all miners. The men were employed in No. 1 shaft counter in No. 11 or Prinrose vein east. Bowman was in breast No. 5, Reilly and Whittle in breast No. 6, Rickert in breast No. 7 and Stakem and Hawk were driving chutes and headings. Hawk was driving a manway to the heading between breasts Nos. 8 and 9 and had come down out of the chute to tell the fan boy to start the fan as the place was filling with gas. He spoke to the gangway men and then started to go back to the chute again, but before he reached the door an explosion occurred, and he was killed by a flying plank from the door. Stakem's body was found close to the remnants of two tin powder kegs; Rickert's body was found west of his breast in the main heading; Reilly's and Whittle's bodies were found in the second breast heading east; Bowman's body was found in the main heading west of No. 5 breast, and it is supposed that he died from the shock. When the explosion occurred it blew out the tail brattice of Reilly's and Whittle's breast, thus cutting off the supply of air. They crawled down from the face to the blind heading to allow the smoke and fumes to pass them, but were overcome and died before they were rescued. Bowman was down nearly to the gangway, but died from exhaustion. The verdict of the Coroner's Jury was to the effect that the men came to their death as a result of an explosion of powder and probably a little gas.

CONDITION OF COLLIERIES

PHILADELPHIA AND READING COAL AND IRON COMPANY

Lincoln Colliery.—General condition good; ventilation and drainage good. Condition as to safety good.

Brookside Colliery.—General condition good; ventilation and drainage good. Condition as to safety, good.

Good Spring Colliery.—General condition good; ventilation and drainage good. Condition as to safety, good.

LEHIGH VALLEY COAL COMPANY

Blackwood Colliery.—General condition good; ventilation good; drainage fair. Condition as to safety, good.

SUMMIT BRANCH MINING COMPANY

Short Mountain Colliery.—General condition good; ventilation and drainage fair. Condition as to safety, good.

Williamstown Colliery.—General condition good; ventilation and drainage fair. Condition as to safety, good.

IMPROVEMENTS

PHILADELPHIA AND READING COAL AND IRON COMPANY

Brookside Colliery.—A tunnel has been completed on 2nd lift to shaft, 90 yards.

A 15 foot fan has been erected to ventilate East Side workings.

A set of return tubular boilers has been installed.

An ash flume has been installed at the boiler house.

A culm plane has been erected to reclaim old Tower City bank.

A supply house has been erected.

A tunnel has been started on the 3rd lift to connect No. 5 vein gangway with the shaft. The tunnel is now in 15 feet.

A stable has been started at bottom of Tender slope.

No. 4 Basin slope has been sunk from No. 4 slope level to the underground level, and connected to the slope below this point.

The underground slope has been abandoned.

The turnout at top of Basin slope is completed.

An 8 $\frac{1}{4}$ inch bore hole was drilled from the surface 731.5 feet, and is used for rope hole for Basin slope.

A pair of 28 x 60 inch engines have been erected on the surface for the Basin slope hoist.

A tunnel has been driven on No. 4 Basin slope, East 2nd lift, from No. 5 to No. 4 vein, 50 2-3 yards.

The bottom of No. 4 slope and the top of No. 4 Basin slope have been so arranged that cars run by gravity to both points, thus dispensing with the use of mules at that place.

An ash flume has been installed at the east boiler house.

A new saw-mill has been erected at the western end of the colliery.

A new supply house has been erected.

A new wash-house has been built.

A 12-inch steam line is being erected from the east boilers to the east breaker; from this point an 8-inch line will be laid to the west breaker.

Good Spring Colliery.—The tunnel from Holmes to Diamond vein and across the basin, 2nd lift.

No. 1 slope, has been driven 125 yards, a total length to January 1, 1909, of 225 yards.

A tunnel from the Mammoth to the Skidmore veins, No. 1 slope, East 3rd lift, has been completed, 43 2-3 yards in length.

A new standard supply house is being erected.

Lincoln Colliery.—The sinking of No. 2 vein, trial slope, has been completed, making a total length of 559 yards.

No. 5 vein, inside slope, has been sunk from 6th to 8th lift, 209 yards, double track.

Turnout on top of No. 5 vein slope completed, 95 yards long.

A bore hole, 1,030 feet deep, from surface to top of No. 5 vein, inside slope, has been finished.

One double track tunnel from bottom of No. 5 inside slope to No. 4 vein has been completed, 84 yards long.

Turnout on No. 4 vein at bottom of No. 5 vein slope has been completed, 40 yards.

A new standard supply house has been erected.

An electric hoisting engine and fan have been erected at No. 2 vein, trial slope.

An extension to electric haulage has been made in East No. 2 vein gangway.

A new powder house and a locomotive house have been erected.

Valley View Colliery.—The water level tunnel has been driven 1,678 feet, to January 1, 1909.

LEHIGH VALLEY COAL COMPANY

Blackwood Colliery.—Tunnel driven from West Orchard vein gangway to bottom split of Mammoth, cutting the Primrose, Holmes and top split, a total distance of 350 feet.

Tunnel at Dundas from Buck Mountain vein to Mammoth vein, 150 feet long.

No. 4 tunnel driven 900 feet during year, and gangways opened on the Orchard veins, East and West.

Track built from breaker to No. 4 tunnel, and a locomotive put in service. Also a frame building, 14 x 22 feet, built to house locomotive.

An oil-burning engine installed at Dundas tunnel, and a frame house erected to accommodate this engine, outside.

Pump house built in Blackwood tunnel, 20 x 75 feet, for breaker pump.

New sump made in Salem vein.

New mule barn, 22 x 90 feet, erected and put into service.

SUMMIT BRANCH MINING COMPANY

Short Mountain Colliery, Outside.—Three Cypress tanks of 50,000 gallons capacity, each, have been erected for fresh water supply and fire protection.

A new slate plane has been constructed on the South side of Big Lick Mountain.

Frame engine house, 22 x 28 feet, has been built and a pair of 16 x 20 inch hoisting engines installed for slate plane hoist.

Sixty-five new style steel mine cars have been built and put into use.

Inside.—Rock Plane No. 3 level, West, from Big vein to White's vein, completed and put into operation.

Engine house built for No. 4 slope extension, and a pair of 14 x 20 inch self-contained, link reversing, geared hoisting engines, installed.

No. 4 slope extension sunk eighty feet.

Connection made from No. 7 lift to No. 4 slope, and new gate being made.

Bear Gap slope sunk 250 feet.

Proving slope in overlying measures, Bear Gap tunnel, sunk 150 feet.

Tunnel from Big Vein to White's vein at pocket, Lykens Valley slope.

Electric haulage installed on 3rd level, and new motor put into service.

Electric haulage installed on Old Level, and motor in service.

Williamstown Colliery, Outside.—The washery, erection of which started in August, is now completed and shipping coal.

Two locomotive type boilers were installed to furnish steam for the new washery.

Two pumps were installed at new washery to handle slush.

One and one-half miles of new railroad were built to connect the new washery with Summit Branch Railroad.

One new 15-ton electric motor was put into service.

A fire proof fan building, constructed of concrete blocks and reinforced concrete, was erected at White Ash air shaft, and is equipped with a 25 foot fan, and a 24 x 36 inch engine, removed from Williamstown side.

Thirty-five new steel mine cars have been built and put into service.

Inside.—Tunnel being driven across basin from No. 1 shaft bottom, West No. 11 vein, South dip, has cut No. 9 vein, North dip, a total distance of 1,650 feet driven.

Rock connection made from No. 1 Shaft, plane level, East No. 11 vein, to No. 1 shaft.

Airway from No. 2 shaft Counter level to Bear Valley slope extension level driven in No. 9 vein.

Tunnel from No. 9 vein to No. 9½ vein in Bear Valley slope, No. 1 counter.

MINE FOREMEN'S EXAMINATIONS

The annual examination of applicants for certificates as Mine Foremen and Assistant Mine Foremen was held in Union Hall, Pottsville, June 19 and 20.

The Examining Board was composed of the following members: Charles J. Price, Mine Inspector, Lykens; William Auman, Superintendent, Lykens; John W. Reilly, Miner, Williamstown; W. C. Wagner, Miner, Tower City.

The following persons passed a satisfactory examination and were granted certificates:

Mine Foremen

A. A. Unger, Muir, P. O.; Charles E. Parker, Williamstown; William L. McGann, Blackwood; John F. Hand, Blackwood; William Minnig, Joliet, P. O.

Assistant Mine Foremen

Lee E. Morgan, Joliet, P. O.; John C. Minnig, Joliet, P. O.; John W. Kniley, Lykens; John Heck, Onset, P. O.; John H. Kissawetter, York Farm; Henry A. Culbert, Reiner City; David E. Harvey, Good Spring; Joseph P. Zerbe, Blackwood; David Newton, Blackwood, John McNeary, Williamstown.

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