angle of inclination is 9° 35′. The slope was driven part of the way through coal, at a cost of $364, but there were 28⅔ yards of rock to cut, from nought up to eight feet, which cost $283 33, and 77 yards driven through sandstone, which cost $3,080. The whole cost for sinking the slope was only $3,952 33. They have a pair of engines, 13-inch cylinder and 18-inch stroke; estimated horse power, 50; the size of their drum is six feet diameter, which has an approved brake attached to it. There is no second opening to the slope, but they are driving for one toward No. 1 drift, and expect to make a connection soon.

### Other New Openings and Connections.

The Delaware, Lackawanna and Western railroad company have made connections between the Hampton shaft and the Oxford shaft, at Hyde Park, and between Tripp's slope and the Brisbin shaft, in the Third ward, Scranton. They have also sunk an air shaft, at Hyde Park, into the workings of the Oxford shaft, and connects also with the Hampton shaft workings. A fan is to be placed at this air shaft which will assist in ventilating both collieries named.

The Pennsylvania coal company have completed a new slope at No. 1 tunnel, in Pittston township, which is intended for hoisting coal. They have also made a second opening for No. 4 slope, in Jenkins township, which is to be used also for ventilation; and the workings of old No. 10 shaft in the 14-foot seam, have been connected with the new No. 10 shaft, in Pittston. No. 2 shaft, Dunmore, was sunk to the lower seam.

The Delaware and Hudson canal company have made a connection, in the 14-foot seam, between Marvine and Leggetts Creek shafts, Providence; and at No. 1 shaft, Carbondale, an air shaft has been sunk, and two more air shafts at No. 3 shaft, and still another at the Coal Brook colliery. These air shafts are only poor-make shifts, unless mechanical means are used to produce ventilation. There are too many of them in Carbondale. What is needed there is a system of air courses inside of the collieries.

At the Filer colliery, Winton, a drift has been driven from a ravine into the workings, for a traveling way for the men to go to and from their work. A new drift has been opened at the Greenwood colliery for mining coal, and the same company have made an additional opening for coal at the Sibly colliery, in Old Forge township. An opening has been made at the Green Ridge slope for ventilation. The above are all the openings and connections made in the district during the year, so far as I am informed.

### Idle and Abandonded Collieries.

The Archbald shaft, Lackawanna township, and Oxford shaft, Hyde Park, owned by the Delaware, Lackawanna and Western railroad company, were idle all through the year; the last work done at the Hyde Park shaft was done in February, and the Scranton coal company's drifts at Bellevue were idle. Bellevue slope and shaft worked only 22½ days.

No. 1 shaft, Pittston township, owned by Pennsylvania coal company, was idle; No. 2 and No. 3 shafts were abandoned as hoisting shafts, and are now used as pumping shafts.

The Marvine shaft, Providence; Powderly slope, Carbondale township, and Breaker, Forrest and Jefferson tunnels, Carbondale City, all owned by the Delaware and Hudson canal company, were idle.

The following collieries have also been idle: Rolling Mill colliery, Scranton, consisting of a slope, tunnel and drift; the Ontario colliery, Pleasant Valley, and the Heidelberg colliery, Pleasant Valley. Spring Brook No. 1

## COLLIERY IMPROVEMENTS FOR 1883.

### Everhart Mines.

P. BLEWITT:

DEAR SIR: We have made the following improvements at this colliery since we took possession in April, 1883: Sunk slope opposite breaker two hundred and sixty-eight feet to basin of Marcy seam; opened tunnel near plane at breaker (is in about fifty feet) to same seam coal, five feet thick bottom part, with four feet fire-clay parting, and four feet top coal above; put in three new boilers at old slope, also put one new hoisting engine at the slope near breaker; built and bought forty new mine cars; erected trestle work one hundred and fifty feet long over main track to slope near office; have driven through fault on north side, find a good vein of clean coal eight feet thick, opened airway and traveling road to same.

ALLEN & POOLE,
*Operators.*

### Fairmount Shaft.

Have sunk main shaft 10′×13′ to the bottom or Red Ash seam two hundred and twenty-feet, and have commenced second opening shaft 8′×10′, which was partly sunk in 1882; have put in a new safety-carriage, making two in main shaft; also got one-and-one-fourth-inch new wire rope in place of old one-and-one-eighth-inch.

A. MORRIS & CO.

### Florence Shaft.

This has been finished, and it is in good working condition.

### Stetler Shaft.

There has been a new slope finished in the mines, also the air-currents have been changed, making an improvement in ventilation.

### Spring Brook Mines.

There has been a new breaker built at this mine, with a capacity for preparing and shipping six (600) hundred tons of coal per day.

### Dunn Colliery.

Has been completed and is in good working condition.

### Greenwood Colliery.

All the improvements are completed in No. 1 shaft, and are now sinking a slope on the north-west side of shaft.

### Sibley Colliery.

Has been improved by putting in an additional steam-pump and four more steam boilers.

### National Mines.

There has been a connection made between the shaft and slope, which is used for a second opening.

SCRANTON, PA., *March 24, 1884.*

The following improvements have been made in coal department of the Lackawanna Iron and Coal Company during the year 1883:

At the Pine Brook colliery there has been driven a rock tunnel seven by sixteen feet, for a distance of five hundred feet at an angle of ten degrees; same has been driven from No. 4, or second, below Clark to Clark vein, cutting one vein of coal about midway. The object of this tunnel being to run all Clark vein coal to one common foot located in second vein below Clark. The tunnel or plane will be provided with double track for letting or lowering down coal in the ordinary way. Our connections have been made with old workings of Clark vein, hence with mule-way or man-way. The man-way upon the surface has been extended towards the breaker some distance by building side walls, and covering with large and substantial flag-stones, making a very complete and easy man-way from lower vein to surface. Above constitutes about all the important improvements made in coal department during year 1883.

R. G. BROOKS, *Superintendent.*

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PATRICK BLEWITT, Esq.,

*Inspector of Mines:*

DEAR SIR: The New York, Susquehanna and Western Railroad Company have in the Lackawanna valley about seven and one half miles of railroad completed and in active operation, and about three and one half miles now under construction. When finished shipments will be made over this road from nine different collieries. Of these, the Greenwood and Sibley collieries have been for a long time in operation. The Dunn is a new operation completed during the last year at a cost of $100,000, and is now rapidly increasing its out-put. Jermyn No. 6, also completed during the last year, is a shaft colliery, having a shaft two hundred and twenty feet deep, cutting two veins of coal, and a very fine, large breaker and commodious outbuildings have also been erected. The cost of this plant is about $120.000. The Winton colliery is now being rapidly developed by a drift of about two thousand feet in length, one thousand four hundred feet of which have already been driven. The breaker foundations have been erected, and the timber for the breaker has been framed, and is ready to be raised. The Dolph colliery is now nearly ready for shipping coal. The plant consists of a very fine breaker and machinery, with suitable out-buildings, and the mine will be operated by a drift and inside gravity plain. The cost of development will be about $80,000.

The Spencer colliery is partly a new operation, and being rapidly completed. The breaker has been framed and raised, and the machinery is now being put in. The mine opening consists of a shaft which has been sunk through four seams of coal—three of which are so far developed as to insure an out-put of eight hundred tons per day from the very start. Coal will doubtless be shipped from this colliery about the 1st of May. The

split of the Baltimore vein to top split, length 90 feet, to be used for transporting coal.

**Butler Coal Company.**

At the Mosier colliery, a new shaft was sunk to the Red Ash seam, a distance of 375 feet, sectional area, 120 feet, to be used as a second opening to the Mosier shaft.

**Waddell & Walters.**

At the Bennett colliery they have extended the old slope in the top split of the Baltimore vein 520 feet.

At the Raubville colliery, the second opening has been completed a distance of 2,000 feet, sectional area, 60 feet, to a drift on the mountain. They have placed a new fan, 16 feet in diameter, in position in the opening, with direct gearing working speed of 45 revolutions per minute. Amount of air exhaused, 50,000 cubic feet per minute. A new Pale pump was put in with 8-foot stroke, 14-inch working barrel, also three new steel boilers, 40×45 feet, and a pair of first-motion engines with conical drum on their hoisting shaft.

**Clear Spring Coal Company.**

At the Clear Spring colliery, a new inside slope was sunk in the Pittston vein, a distance of 500 feet, sectional area, 126 feet, with a grade of 10 degrees.

**Elliott, McClure & Co.**

The Sibly breaker of Elliott & McClure was burned down on the morning of February 6, 1886. They immediately rebuilt, and started their new breaker on July 20, 1886.

**State Line and Sullivan Railroad Company.**

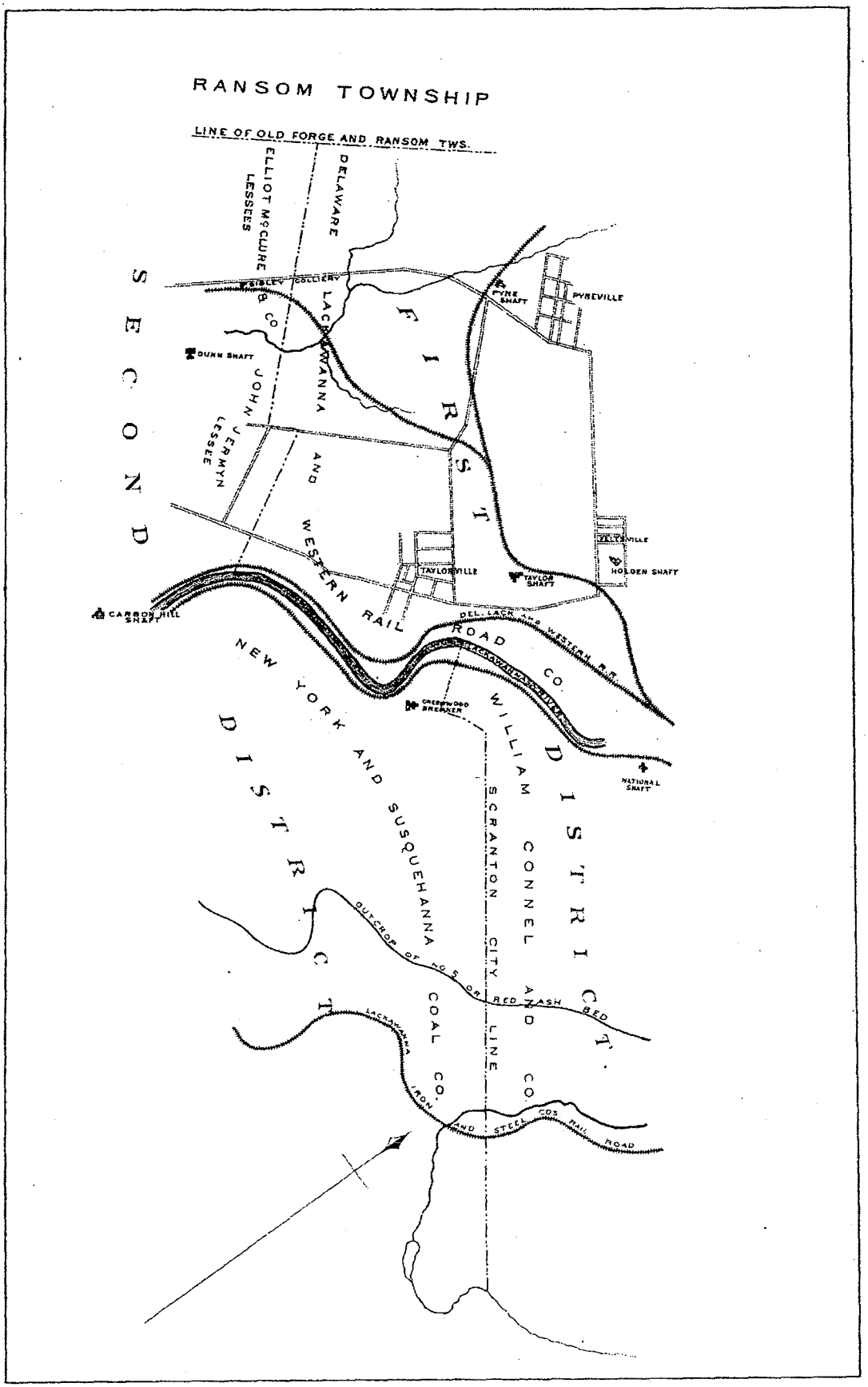
At the Bernice colliery, Sullivan county, a new shaft was sunk to the vein now working, a distance of 69 feet, sectional area, 120 feet. They are going to place a fan on this shaft for ventilation to take the place of a furnace which does not give satisfaction. A tunnel was driven 604 feet from the bottom seam to top seam for transporting coal.

**W. G. Payne & Co.**

At the East Boston colliery, a tunnel was driven from the Red Ash to the Ross seam, a distance of 457 feet, sectional area, 84 feet. This tunnel opens a large territory of good coal for this company.

**Wyoming Valley Coal Company.**

The Forty Fort breaker of this company was burned down in 1885. The coal was taken to their Harry E breaker, about one mile distant, until the breaker could be rebuilt, which work was started immediately and finished July 25, 1886.




PA Mine Inspection 1890

ELLIOTT, McCLURE AND COMPANY

Sibley Colliery.—By enlarging the second opening the ventilation of this colliery has been improved, but it is not yet up to the requirements. The drainage could also be improved. The officials in charge are making every effort to improve the conditions.

WM. CONNELL AND COMPANY.

National Shaft.—General condition fair.

Meadow Brook Tunnel.—Ventilation and drainage fair.

AUSTIN COAL COMPANY

Austin tunnel.—General condition fair.

GIBBONS COAL COMPANY

Gibbons Mine.—General conditions fair. The principal work done at this mine is the taking out of pillars at out-crop.

## IMPROVEMENTS

DELAWARE, LACKAWANNA AND WESTERN RAILROAD COMPANY

Continental Colliery.—One Rock slope located about 600 feet north east of shaft, from Clark to Dunmore No. 3 vein, 7x12 feet length, 375 feet on a pitch of 15 degrees. They are now opening Dunmore No. 2 vein east and west of slope.

Archbald Colliery.—One Rock plane tunnel located about 1,800 feet west of shaft from New County to Big vein, 7x14 feet, length 275 feet; pitch 8 degrees. Connection is being made with east section of Big vein.

A new 8x6x24 ventilating fan of the Guibal type; size of engine 18x30 inches, steel casting, brick engine house with sheet-iron and concrete roof, concrete foundation, and fan-drift connected to the up-cast shaft, absolutely fire-proof. This fan was completed and connected to the mines September 1, 1904, and gives satisfactory results. A test was made in fan-drift a few days later to ascertain the amount of ventilation produced. Record, 236,500 cubic feet of air per minute. Speed of fan 65 revolutions, water gauge 1½ inch, this being on an average of 90,000 cubic feet more air than produced by the old ventilating fan.

A new 1,250 horse power B. & W. water tube boiler and brick-house are now nearly completed. Located about 250 feet west of breaker. This will do away with the old cylinder boilers.

### JERMYN AND COMPANY

Jermyn No. 1 Colliery.—The main shaft was sunk from No. 2 Dunmore to No. 3 Dunmore, a distance of 55 feet. A "Tail Rope" engine was installed outside to haul coal up slope to outside from top vein and east middle vein. No. 3 or Nickle Plate shaft was recribbed.

Jermyn No. 2 Colliery.—A slope was driven from Marcy vein to Clark vein, a distance of 300 feet on a 12 degree pitch. A rock plane tunnel was driven from Dunmore No. 2 vein to Clark vein, a distance of 328 feet on a pitch of 17 degrees.

### DELAWARE AND HUDSON COMPANY

Greenwood Colliery.—No. 2 slope in Checker vein extended 430 feet for development. New drift to New County vein opened, and surface railway constructed from mouth of same to head of No. 2 slope. Bore hole 256 feet deep put down for compressed air.

### ELLIOTT, McCLURE AND COMPANY

Sibley Mine.—The shaft has been sunk 115 feet from the Clark vein cutting No. 2 and No. 3 Dunmore veins and are now at work opening No. 3, the No. 2 being developed from an inside slope. Rope haulage has been installed in the bottom split of the Clark and in No. 2 Dunmore, and are at present installing a rope haulage in the New County vein. The mountain plane in the Clark vein has been extended 750 feet. A new stable has been built in the Clark vein. The breaker has been equipped with additional Emory slate pickers; a new 50 ton Barker track scale has been placed owing to the increased capacity of railroad cars.

ELLIOTT McCLURE AND COMPANY

Sibley Colliery.—The new breaker, boiler house and shaft have been completed, and the lower Dunmore veins are in course of development.

O'BOYLE-FOY ANTHRACITE COAL COMPANY

O'Boyle-Foys Colliery.—This colliery is developing rapidly and promises to be one of the largest producers in the basin during the life of the property. At present a tail-rope system is being installed.

I have had no call to investigate accidents at this colliery, which speaks well for the management, as the vein being mined has a very bad roof.

DELAWARE, LACKAWANNA AND WESTERN RAILROAD COMPANY

Hallstead Colliery.—Two new, very strong auxiliary dams will be built of concrete, on the rock planes, driven from the Red Ash to the Marcy vein.

RELIANCE COAL COMPANY

Reliance Colliery.—The second opening for the Clark vein in this mine has been secured after much difficulty. At present the Clark vein and shaft are filled with water, which is overflowing into the Twin shaft workings at the Marcy vein. This water comes from the Pennsylvania Pittston vein.

A new boiler plant is in course of construction.

HUDSON COAL COMPANY

Spring Brook Colliery.—The operations at this mine are confined to second mining almost exclusively, which is being done with care.

Langcliff Colliery.—No. 2 slope in the Red Ash vein is now completed, having been driven a distance of 800 feet. The mines are principally a pillar proposition, and are in fair condition.

JERMYN AND COMPANY

Jermyn and Company.—The coal that was being prepared at No. 2 breaker is now conducted underground and prepared at No 1 breaker; a new washery has been erected at No. 2 on the site of the old breaker recently destroyed by fire. The estimated capacity of this washery is not less than 700 tons per day.

a brick washhouse at boiler house for the firemen, equipped with steel lockers and other improvements which make it modern in every respect.

LEHIGH VALLEY COAL COMPANY

Seneca Colliery, Outside.—The fire that developed from a smouldering condition in the old culm bank, and threatened the destruction of the breaker, was isolated by a trench cut through the bank. The Coxey shaft fan house was protected from sparks of passing engines by a corrugated iron, and the shaft is completely recribbed. 5276 feet of diamond drill test holes were completed for protection against accidents, in testing cover limits over Pittston and Marcy veins. A Williams crusher was installed for Pittston vein flushing. Inside.—A 4 inch drainage hole drilled from Marcy to red ash vein was completed. Two rock tunnels, driven through the upthrow in the red ash vein, were finished during the year.

William A and Lawrence Collieries, Outside.—An 8 inch rope haulage hole was drilled from surface to red ash vein at Babylon mine. Beginning January 1, 1907, the Lawrence breaker will be operated as a washery only, the coal being prepared at William A breaker. Inside.—A new haulage road has been driven 2,500 feet through middle split pillars to Babylon mines to minimize transportation. The road was continued in the bottom split across the Babylon tract to the westward, where a 300 foot tunnel opens up the virgin coal. This haulage road will be eventually connected with No. 10 tunnel at Campbell's Ledge, when it will be a continuous road of 16,000 feet in length.

HILLSIDE COAL AND IRON COMPANY

Consolidated Slope.—They are steadily opening on the bottom Red Ash vein at Consolidated slope, and have also just opened on the split of the Checker underlying the main Checker vein, about six feet apart. This has been done direct from the Consolidated main slope.

HUDSON COAL COMPANY

Langcliff Colliery.—No. 2 slope in Red Ash vein extended 380 feet. One 54 inch locomotive type boiler installed.

JERMYN AND COMPANY

Jermyn No. 1 Colliery.—This mine went on strike February 13 and the strike continued until August 23. On October 27 a cyclone destroyed the breaker which is now being rebuilt. During the suspension new sills and pockets were placed under the breaker.

Jermyn No. 2 Colliery.—The men at this mine went on strike February 13 and remained out until November 1, when operations were again resumed. A new rope haulage system was installed in the outside slope to the Clark and Marcy veins.

ELLIOTT, McCLURE AND COMPANY

Sibley Colliery.—On June 23 a fire broke out in the breaker about 10:45 A. M. and destroyed it, also the engine house, boiler house and supply house. A new breaker, boiler plant and other buildings are

now in course of erection. A new shaft from the surface to No. 3. Dunmore vein is being sunk, and it is expected that all improvements will be completed early in the Spring.

### AUSTIN COAL COMPANY

Austin Tunnel.—A second opening and return have been driven in the Clark vein, connecting the new slope workings with those of the old. A shaft will also be sunk, connecting the Marcy and Clark veins for a second opening.

### O'BOYLE-FOY ANTRACITE COAL COMPANY

This is a new operation, and they started to prepare coal in the early Spring. However, not a great deal of development work has been done. The B and C veins are opened and a fan and fan house have been installed and the fan is now in operation.

### RELIANCE COAL COMPANY

Reliance Colliery.—A new shaft to the Clark vein has been completed, air connections made and carriages installed. A new fan and fan house have also been added.

### DELAWARE, LACKAWANNA AND WESTERN RAILROAD COMPANY

Hallstead Colliery.—This Colliery has been idle for the past few years, but during the year just closed, a force of men has been constantly employed, reopening the veins and restoring ventilation, also renewing the outside plant. The main shaft and air shaft have been recribbed, and the boiler plant building rebuilt. The following work is being done, but not completed: Preparing the feeder dam tower and shaft, also rebuilding the Hallstead breaker; installing new scales on both the light and loaded tracks, and repairing the bore holes and boiler plant, as well as making general improvements to all the buildings.

## GENERAL REMARKS

The following Collieries were idle during the year. Central Colliery which consists of No. 13 and Law shaft, suspended operations in March for repairs and improvements and did not resume during the year.

The Hallstead, while very active, neither mined nor prepared any coal. Jermyn Nos. 1 and 3 were idle, through strikes and cyclones, seven months, in all 72 days.

Jermyn No. 2 was idle eight months on account of a strike, working in all 65 days.

The Sibley was destroyed by fire, and worked but five months during the year, or a total of 84 days. Had these mines been in operation, the tonnage for the District would have been much greater.

I desire to call attention to the number of accidents that occurred through individual carelessness. There seems to be no way to prevent them, although ordinary observance of the instructions given would reduce the list at least one-half. Some men will insist that

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 manway 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

Suring-Brook and Langcliff 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 installed 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

An 80 horsepower electric hoist was installed at Corey slope and a fireproof engine house built. A fan 15 feet in diameter, driven by a 55 horsepower motor, was installed in a fireproof fan house to properly ventilate the workings of the Corey slope.

Central Colliery.—No. 13 shaft has been abandoned as a hoisting shaft. A motor road was made from No. 13 to Laws shaft, and the coal is hoisted at Laws shaft. No 13 shaft is only used as a pumping station and for lowering and hoisting men.

A new electric pump has been installed in Laws shaft, capable of handling 1,000 gallons of water per minute.

### DELAWARE, LACKAWANNA AND WESTERN RAILROAD COMPANY

Pyne Colliery.—A second opening and return airway, 7 by 12, was driven from the Clark to the No. 1 Dunmore vein, pitch 25 degrees, total length 78 feet. A Welch automatic overwind device, or engine stop, was installed on the hoisting engines.

Taylor Colliery.—Concrete breaker and washery completed and put in operation during the month of July.

### JERMYN AND COMPANY

Jermyns Colliery.—A new wash-house was built of brick and concrete, 80 by 20 feet, to accommodate 200 men and boys, with shower bath and lockers. A supply house was built of brick and concrete, 80 by 24 feet. Made slope from outside to Clark vein, to be used as second opening, also air shaft from Clark vein to Monkey vein. Balance plane in No. 2 mine. A new tower was erected at No. 3 shaft.

### ELLIOT, McCLURE AND COMPANY

Sibley Colliery.—Concrete stables were completed in No. 2 Dunmore vein, also one in No. 3 Dunmore vein. Two Lehigh Valley double jigs for the preparation of egg and stove coal were installed in the breaker. An additional air compressor is being installed. A new compound duplex Jeanesville pump, with steam cylinders 22 and 34 inches, 16 inch plunger, 36 inch stroke, is being placed in position in the Dunmore vein. Big vein is being opened by a drift north of shaft. This drift has been driven about 300 feet.

### HILLSIDE COAL AND IRON COMPANY

Consolidated Colliery.—Made a new opening on the North dip for hoisting slope for Red Ash vein. Engines moved from inside to outside. Fan and fan-house, car and blacksmith shop, barns, storehouses, locomotive house, foreman's office, emergency hospital, wash-house and boiler plant, were built near slope. This was done on account of fire in surface vein under location of old buildings near breaker.

## CONDITION OF COLLIERIES

### DELAWARE, LACKAWANNA AND WESTERN RAILROAD COMPANY

Taylor and Pine Collieries.—Ventilation, drainage and condition as to safety, good. Pillars are being extracted.

Halstead Colliery.—Ventilation and drainage, good. Condition as to safety, fair. Pillars are being mined.

### PENNSYLVANIA COAL COMPANY

Old Forge and Sibley Collieries.—Ventilation, drainage and condition as to safety, good. Pillars are being removed.

Central Colliery.—Ventilation, drainage and general condition, good. Pillars are being mined.

### JERMYN AND COMPANY

Jermyn Colliery.—Ventilation, drainage and condition as to safety, good. Mining pillars extensively.

### DELAWARE AND HUDSON COMPANY (INCLUDING HUDSON COAL COMPANY)

Langcliffe Colliery.—Ventilation, drainage and condition as to safety, good. Mining pillars exclusively.

### HILLSIDE COAL AND IRON COMPANY

Consolidated Colliery.—Ventilation, drainage and condition as to safety, good. Pillars are being removed.

### LEHIGH VALLEY COAL COMPANY

Austin Colliery.—This mine is exhausted and the opening closed.

## IMPROVEMENTS

### DELAWARE, LACKAWANNA AND WESTERN RAILROAD COMPANY

Pyne Colliery.—One electric locomotive pit was built in east side of Clark vein for motors working in that section and in No. 1 Dunmore vein, east side.

Three electric locomotives, including one 7½-ton Jeffrey locomotive, were installed in No. 1 Dunmore vein, east side.

One 6½-ton Jeffrey locomotive was installed in No. 1 Dunmore vein, west side.

One 7½-ton General Electric locomotive was installed in New County vein.

### PENNSYLVANIA COAL COMPANY

Sibley Colliery.—Outside: The breaker was closed down March 31 and during the summer months the structure was razed to the ground.

Inside: A main haulage-road was made from Old Forge shaft No. 2 workings to Sibley shaft workings, and the coal that is being mined in Sibley shaft is hauled over this road to the foot of Old Forge No. 2 shaft. It is then hoisted to the surface, and from head of the shaft it is pulled by locomotive to Old Forge breaker, where it is prepared.

### JERMYN AND COMPANY

Jermyn Colliery.—Outside: One motor generator was installed, and a new wash house was built at No. 2 shaft. Also replaced 60-pound rails on empty and loaded branches above and below the breaker with 90-pound rails.

Inside: A slope was driven from No. 2 to No. 3 Dunmore vein. Opened up No. 3 Dunmore vein at No. 3 shaft. Also installed two coal-cutting machines and an engine at No. 3 shaft.

## MINE FOREMEN'S EXAMINATIONS

The annual examination of applicants for certificates of qualification as mine foremen and assistant mine foremen was held in the High School, Old Forge, June 6 and 7. The Board of Examiners was composed of Augustus McDade, Inspector, Rendham; David Lloyd, Superintendent, Scranton; Morgan E. Griffiths, Miner, Taylor; Michael Cosgrove, Miner, Old Forge.

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

## MINE FOREMEN

Michael Clunnan, George G. Williams, Patrick J. Clunnan, Edward Green, Rendham; David J. Griffiths, George Cavill, Benjamin Jones, Thomas Howells, Evan Jenkins, William T. Rogers, Arthur Whitehouse, Frank Jordan, Taylor; James J. Dixon, Olyphant; John T. Painter, Stephen F. Sick, Ralph Sidney Cordy, Thomas F. Lynch, John Nelson, Martin Lydon, Old Forge; Patrick Loughery, Joseph J. Regan, James J. Dunleavy, Charles Keith, William J. Matthews, Jr., Avoca; Elmer Jones, Plymouth; William Dick, Arthur Harrison Tucker, William Kelly, John Jennings, James Martin, Luther Titus, Frank Jennings, Moosic; John R. Mould, Kingston; Donald D. Cruser, Arthur B. Emanuel Wilkes-Barre; Thomas J. Morgan, Seth Griffiths, Emlyn Davies, Louis H. Leitner, Thomas W. Dawson, William Morgan, Harry Smith, Michael J. Rafferty, Reese Jones, Augustine McGuire, Edward J. Davis, Scranton; Frank Bacher, Duryea; James Pugh, Greenwood; James O'Hara, Minooka.

## ASSISTANT MINE FOREMEN

Patrick Murphy, William R. Davis, Samuel Semenza, Old Forge; Steve Paytas, Joseph R. Paytas, Taylor; Thomas Dawson, James Perry, Duryea.