

house for men to wash and change their clothes in ; there is no standing gas or water in the mine ; the mining boss seems to be a practical and competent man ; he has a fire-boss to assist him ; there are no boys allowed to work in the mine under 12 years of age ; the engineers are said to be competent, practical and sober men ; there are no persons allowed to ride on loaded carriages in the shaft ; they do not allow more than 10 men to ride on the safety carriage at one time ; the persons having charge know their duty in case of death or serious accident ; the shaft landings are protected by safety gates.

SLOAN COLLIERY.

This colliery is located in Lackawanna township, and situated 1 mile north-west of the Lackawanna river ; the shaft is 250 feet deep to the Diamond, 255 feet deep to the Rock, and 393 feet deep to the G or Big vein ; this is the cross-section of strata in the shaft opening ; they are also driving a slope for the second opening ; it is 500 feet long to the E vein, and 580 feet long to the T vein ; they employ 18 company men in the mine, 5 mechanics and 2 bosses outside ; in all 25 men ; they have a double breaker attached to the shaft tower ; they do not intend to mine any coal until they connect between the shaft and slope for a second opening ; it will take 3 months before they can connect.

ARCHBALD COLLIERY.

This colliery is located in Lackawanna township, and lying one and one-fourth miles north-west of the Lackawanna river, in Keiser valley. It is operated by the Delaware, Lackawanna and Western railroad company. John Gooden is mining boss and John Fern is outside foreman. The slope is used as a second opening.

Description.—These mines are opened by a shaft ; it is 188 feet to the Diamond, 216 to the Rock and 307 feet deep to the "G" or Big vein ; it is 10 feet by 27 feet, and by a slope 500 feet long driven at an angle of 18 degrees ; it is — feet wide by — feet high ; there is a double breaker attached to the shaft tower ; they mine and prepare about 240 tons of coal per day ; they employ 28 miners, 28 laborers, 8 drivers, 2 door-boys and 13 company men in the mines ; 52 slate pickers, 7 head and plate men, 1 driver, 19 company men, 9 mechanics and 2 bosses outside ; in all 169 men and boys ; they are working the "G" or Big and Rock veins of coal ; average thickness of "G" or Big vein 10 and Rock 6½ feet ; they work headings 12, air-ways 15 and chamber 30 feet wide ; they leave pillars from 5 to 6 yards wide to sustain the roof ; they leave cross-entrances from 50 to 70 feet apart for the purpose of ventilation ; the roof is good slate ; the mines are in a good working condition.

Ventilation.—Ventilation is produced by means of a fan located near the main opening ; the intake is located at mouth of shaft ; it contains an area of 160 feet ; the upcast is located in air-shaft, it contains an area of 110 feet ; the amount of fresh air is 10,200 cubic feet per minute ; there is very little noxious or poisonous gas evolved in these mines ; the main doors are hung so that they will close of their own accord ; they have attendants at main doors ; they have double doors on main traveled roads and an extra one in case of an accident to any of the others ; the air is circulated to the face of the workings in two splits ; the amount of ventilation has been measured and reported according to law ; ventilation is good.

Machinery.—They use one pair hoisting engines of 120-horse power, one breaker engine of 80-horse power ; in shaft engine room one fan engine of 60-horse power, one steam-pump at foot of shaft of 20-horse power ; they have two metal speaking tubes in the shaft ; they have two safety-carriages with all the modern improvements ; they have an adequate brake and flanges of sufficient strength and dimensions for safety attached to the hoisting drums ; they use standard wire ropes with clevis and cone attachment ; the boilers have been cleaned and examined and reported in good condition according to law ; they have a steam-gauge to indicate the pressure of steam ; the breaker machinery is fenced and boxed off so that operatives are safe.

Remarks.—They have furnished a map of the mines; they have a second opening for each vein located about 1,000 feet from main opening; they have a house for men to wash and change their clothes in; they have an opening to the surface where men and mules can travel in and out at all times; there are no boys working in the mines under twelve years of age; the engineers seem to be experienced, competent and sober men; the mining boss seems to be an experienced and competent man; the parties having charge know their duty in case of death or serious accident; the shaft landings are protected by safety-gates.

CONTINENTAL COLLIERY.

This colliery is located in Lackawanna township, and lying one and one-fourth miles north-west of the Lackawanna river, in Keiser valley. The shaft is 112 feet to the Diamond or E, 242 feet to the F or Rock, and 292 feet deep to the Clark vein; the opening is 10 feet by 21 feet. It is operated by the Delaware, Lackawanna and Western railroad company. William Dorne is mining boss, and James F. Green is outside foreman.

Description.—There is a double breaker attached to the shaft tower; they mine and prepare 470 tons of coal per day; they employ 67 miners, 67 laborers, 23 drivers, 11 door-boys and 20 company men in the mine; 46 slate pickers, 8 head and plate men, 2 drivers, 20 company men, 10 mechanics and 2 bosses outside; in all 276 men and boys; they have opened from the Clark to the G vein by a rock tunnel 850 feet long; they are working the Clark vein of coal; average thickness 7 feet; they are just opening in the G vein; they work headings 12, air-ways 18 and chambers 30 feet wide; they leave pillars from 5 to 7 yards wide to sustain the roof; they leave cross entrances about 20 yards apart for the purpose of ventilation; the roof is good slate; the mine is in a good working condition.

Ventilation.—The ventilation is produced by means of a fan, which is located north of main shaft; the intake is located at the mouth of shaft; it contains an area of 100 feet; the upcast is at fan air-shaft, area 100 feet; the amount of pure, fresh air is 31,740 cubic feet per minute; there is no noxious or poisonous gas evolved in these mines; the main doors are hung so as they will close of their own accord; they have attendants at main doors; they have double doors on the main traveled roads, and an extra door in case that any of the others should get broken; the air is circulated to the face of the workings in two splits; the amount of ventilation has been measured and reported according to law; ventilation is good.

Machinery.—They use one pair of hoisting engines of 120-horse power, one pumping engine of 95-horse power and one breaker engine of 40-horse power, all in shaft engine room; one steam pump foot of shaft of 80-horse power, and one fan engine in the fan engine house of 60-horse power; they have a metal speaking tube in the mine; they have two safety carriages with all the modern improvements; they have flanges of sufficient strength and dimensions for safety, and an adequate brake on their hoisting drum; they use stranded wire ropes with clevis and cone attachment; the boilers have been cleaned and examined and reported in good condition; they use a safety-valve to indicate the pressure of steam.

Remarks.—They have furnished a map of mine; they have an opening to daylight where men and mules travel in and out; they have no house for men to wash and change their clothes in; the mining boss seems to be a practical and competent man; there are no boys working in the mine under twelve years of age; the engineers seem to be experienced, competent and sober men; the parties having charge know their duty in case of death or serious accident; the shaft landings are protected by safety-gates; the breaker machinery is fenced and boxed off so that operatives are safe.

HAMPTON COLLIERY.

This colliery is located in Lackawanna township, and lying one mile north-west of the Lackawanna river; it is 125 feet deep to the Diamond vein; it is 16 feet by 9 feet; it is operated by the Delaware, Lackawanna and Western railroad company. Thomas Carson is mining boss, and Jas. F. Green is outside foreman.

angle of inclination is $9^{\circ} 35'$. The slope was driven part of the way through coal, at a cost of \$364, but there were $28\frac{3}{4}$ 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 shafts, 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 ABANDONED 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 $22\frac{1}{2}$ 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

stroyed by fire in April, 1898, is about to be rebuilt by the People's Coal Company, of Scranton, which will operate the colliery in the future.

Washeries.

A number of washeries have been built during the year, and others are in course of construction.

Colliery Improvements During the Year 1899.

Following will be found a brief description of the improvements made in and about the mines of the district during the year. Other items of similar work have been omitted, owing to the inability to collect the particulars of the same. Therefore, the statement does not cover all the new work done during the year to facilitate development, transportation, ventilation and drainage.

Delaware, Lackawanna and Western Railroad Company.

Archbald Mine.—The work of installing a main and tail system of haulage in the Rock vein is in progress. This will require 9,000 feet of rope; the grade is regular for the most part, and in favor of the loaded trips. The engine which will be used is 16x36 inches.

A pair of first motion engines have been erected and are ready for use to hoist in the main shaft; dimensions 22x48 inches. These will take the place of the geared engines formerly used.

A new tunnel is in course of construction, its dimensions are as follows: 7 feet by 14 feet by 300 feet long. It will connect the Rock and Diamond veins on a grade of 5 per cent. when finished.

Sloan and Central.—These shafts have been sunk from the Clark to the Dunmore vein. The work of developing the latter named vein has not yet been commenced beyond the sinking.

Cayuga.—There has been installed at the above mine an electric haulage plant, which is now in operation. The power house is located on the northerly side of breaker on the same elevation as the hoisting engines.

The engine is a McEwing design and built by the Ridgway Engine Company, of Ridgway, Pa. Its rated horse power is 305, stroke 16 inches; bore of cylinder, 10 inches; speed, 240 revolutions per minute. The dynamo or generator is of the Westinghouse Electric Company make. Its speed is 500 revolutions per minute, voltage 250, amperes 600.

The current generated is transmitted to the interior workings of the mine by a four naught insulated wire, where three electric motors of the General Electric Company's make, weighing thirteen tons

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.

Pyne Colliery.—A second opening rock tunnel was driven from the New County vein to the Big vein, size 7 feet x 12 feet, length 200 feet, pitch 18 degrees. Installed one 200 K. W. electric rotary converter for mine haulage purposes. Installed and working two 6½ ton motors without reels, and five 6½ ton motors with reels. Installed new water fire lines for protection outside to breaker and out-buildings. Installed 2½ batteries or 10 boilers of the Babcock and Wilcox water tube type, 1515 horse power. Brick building, boilers brick lined, iron trusses for roof, and equipped with Parson's steam blower. Cylinder boilers and old boiler house removed. Hoisting engines were remodeled and removed further away from breaker onto a new foundation and in a new brick building.

Archbald Colliery.—Installed two batteries or 8 boilers of the Babcock and Wilcox water tube type, 1212 horse power. Brick buildings, boilers brick lined, iron trusses for roof, and equipped with Parson's steam blower. Old cylinder boilers removed and old boiler house torn down and removed. Installed fire lines and plugs on the outside for fire protection. Rock tunnel driven from Rock to Diamond vein, size 7 feet x 12 feet, and 75 feet long. Rock plane tunnel from New County vein to Big vein, size 7 feet x 14 feet, length 220 feet.

Continental Colliery.—Second opening rock tunnel driven from Dunmore No. 2 vein to Clark vein, size 7 feet x 12 feet, length 125 feet.

Sloan and Central Collieries.—Second opening rock tunnel driven from Clark vein to New County vein, 7 feet x 12 feet, length 150 feet. Also to do away with hoisting coal at the Central main shaft to the surface, and hauling over with steam locomotive to Sloan breaker; the coal is now transported by electric motor from Central to Sloan under ground, in the Clark vein. Six additional reel motors were installed at this mine during the year.

Dodge Colliery.—A new brick hoisting engine house, size 36x36; and a new pair of direct acting engines, size 22 inches x 36 inches. A new washery annex, size 24 feet x 60 feet for small sizes, capacity 400 tons per day.

Taylor Colliery.—Installed 4 new tubular boilers, 150 horse power each, also brick boiler house for the same, size 53 feet x 41 feet. Installed pair of breaker engines 12x30 inches in a new brick building 36 feet away from breaker. Rock tunnel driven from New County vein to Clark vein, size 7x14x184 feet, also new air shaft for ventilation from New County vein to Clark vein to ventilate above tunnel, size 8x10x23 feet.

LEHIGH VALLEY COAL COMPANY

William A. Colliery.—A new boiler plant consisting of seven batteries, with 2100 horse power was completed. A steam line was extended from this plant to the Lawrence and Babylon mines, and the steam for the three collieries is now furnished from this plant. New cribbing was placed in the main shaft. One pair of 12x22 inch hoisting engines was placed in the Clark vein to replace the old pair which was too small for the work. One 1000 and one 600 gallon pump was placed in the Red Ash vein for silting.

Lawrence Colliery.—A William's crusher was installed to dispose of refuse from breaker, which is run in the mine.

Hyde Park Colliery.—Ventilation and drainage good, except a portion of the New County slope where the ventilation can be improved.

Dodge Colliery.—Ventilation and drainage fair.

Holden Colliery.—General condition as to safety good.

Taylor Colliery.—Ventilation and drainage are good in the Clark and New County veins, but poor in the Big and Rock veins.

Bellevue Colliery.—General condition as to safety good.

National Colliery.—Ventilation fair, drainage good.

PEOPLE'S COAL COMPANY

Oxford Colliery.—Ventilation good, drainage fair.

DELAWARE AND HUDSON COMPANY

Greenwood No. 1.—General condition good.

Greenwood No. 2.—Ventilation good, drainage fair.

SCRANTON COAL COMPANY

Capouse Colliery.—General condition as to safety good.

IMPROVEMENTS

DELAWARE, LACKAWANNA AND WESTERN RAILROAD COMPANY

Pyne Colliery.—Completed July 9 the installation of an 18 x 10 x 12 inch underwriters' fire pump, capacity 1,000 gallons per minute and equal to 4 1-8 nozzle streams. Fire proof brick building for pump and hose cart. Also fire alarm signals installed in breaker. Erected a new Mine Hospital in a more convenient place inside.

Archbald Colliery.—One rock plane tunnel from New County vein to Big vein, west of shaft about 3,000 feet, 7 feet x 14 feet, pitch 10 degrees, length 280 feet. One rock plane tunnel from New County vein to Big vein, 2,000 feet southwest of shaft, 7 feet x 14 feet, pitch 10 degrees, length 315 feet. One rock tunnel from Rock vein to Diamond vein, 1,800 feet south of shaft, 7 feet x 14 feet, pitch 10 degrees, length 510 feet. One rock plane tunnel about 3,000 feet west of shaft, from Rock vein to Diamond vein, for second opening, 7 feet x 12 feet, pitch 10 degrees, length 230 feet.

Continental Colliery.—One rock plane tunnel from Rock vein to Diamond vein, 7 feet x 14 feet, pitch 10 degrees, length 200 feet.

Hyde Park Colliery.—A new washery annex was completed and put in operation April 23; capacity 600 tons per day. Installed in breaker 3 tandem 5-foot slate pickers. Took out the wood floor in breaker engine room and replaced it with concrete. Removed the old boilers and boiler-house on account of being too close to the breaker. This has improved the condition of this colliery very materially. In September the wood cribbing in the main shaft and the central air shaft was taken out and replaced with concrete and expanded metal. One rock plane tunnel from Rock vein to Diamond vein, 7 feet x 14 feet, pitch 10 degrees, length 200 feet. One rock tunnel from No. 2 Dunmore vein to Clark vein for return air and second opening, 7 feet x 12 feet, pitch 20 degrees, length 250 feet.

Hampton Colliery.—Idle since October 20 for extensive repairs on breaker. When completed the breaker will be almost entirely equipped with new machinery which includes 12 of the latest improved 5 foot tandem slate pickers. The wood cribbing in the shaft was taken out and replaced with concrete and expanded metal. A new fire proof mine Hospital and Foreman's office were also completed inside.

Sloan Colliery.—One rock tunnel was driven from the New County vein to the Big vein for return air.

Central Mines.—A new 8x6x24 foot diameter fan with steel casing on concrete foundation has been installed at this mine to replace the old 14 foot diameter belt-driven ventilating fan. Also a fire proof brick building for engine room. Class and size of engine: Corless Tandem, high pressure cylinder 14x36 inches; low pressure cylinder 22x36 inches, 84 horse-power. The engine is connected direct to the fan. The fan was connected to the mine May 26.

Central Boiler Plant.—Installed a modern 6,000 horse-power open Cochrane water heater and a new fire proof brick building for water feed pumps, store room and Foreman's office.

Electrical Machinery Installed

Pyne Colliery.—One 10 ton electric motor on west gangway Clark vein. One 1,000 gallon electric centrifugal pump at foot of slope in Clark vein; induction motor, alternating current 400 volts. One 450 gallon electric centrifugal pump in west side dip; induction motor; alternating current 400 volts. Power is taken to these pumps from the surface through bore holes.

Archbald Colliery.—One 6½ ton electric motor in the Big vein.

Continental Colliery.—One 100 horse-power electric motor hoist on Dunmore slope; induction motor; alternating current 400 volts.

Hyde Park Colliery.—One 100 horse-power electric hoist on Dunmore slope; induction motor; alternating current 400 volts.

Sloan Colliery.—One 5½ ton electric motor in surface vein.

Central Water Shaft.—Installed during the year at the foot of the shaft in the Clark vein, an 800 horse-power six-stage electric centrifugal pump. Capacity 5,000 gallons per minute; alternating current; 3 phase; 2,100 volts. Column pipe 16 inch diameter. Lift 480 feet. This pump was put in operation the latter part of December, and to date is apparently working satisfactory. This pump is used in connection with the automatic bucket water hoist that was installed and commenced operation in August 1905.

Bellevue Colliery.—Grading and cutting rock at foot of Main shaft No. 2 Dunmore vein to improve the foot. Installed electric hoist in No. 2 Dunmore vein to operate No. 2 slope. Installed electric motor on V gangway Clark vein. Installed electric motor in New County vein. Rock cut in New County vein to take Big vein coal to New County vein. Tore down old boiler house. Installed new middle rolls in breaker. New water line reservoir to pump house. Erected new brick office for foremen, also new brick pump room. Erected a new brick oil house.

Dodge Colliery.—Installed 3 electric motors, one in Diamond vein, and two in New County vein. Tore down old boiler house.

CONDITION OF COLLIERIES AND IMPROVEMENTS

DELAWARE, LACKAWANNA AND WESTERN RAILROAD COMPANY

Archbald.—A new washery annex was completed and put into service on September 13, capacity 600 tons per day.

Hyde Park.—One rock tunnel 6 x 12, length 125 feet, from Rock vein to Diamond vein, to be used as a second opening.

One 10 x 18 shaft, east of the breaker, sunk to the Surface vein a depth of 80 feet, to be used as a second opening and air shaft. This shaft has been completed, but the ventilating fan has not yet been installed.

One 12 x 12 air shaft, to be sunk to the Dunmore veins, has been sunk to a depth of 35 feet, and is now in progress of sinking. This shaft will be equipped with an 8 x 24 Guibal fan with a steel casing.

Hampton.—One rock tunnel 7 x 12, length 159 feet, from Rock to Diamond vein, to redeem bottom coal in Diamond.

Sloan.—One rock tunnel 7x12 feet and 90 feet in length, from surface to Surface vein, to be used as a second opening.

One rock slope from the Clark vein to the No. 3 Dunmore vein, 7x12, and 475 feet in length, pitch 15 degrees.

One shaft 12x32 and 185 feet in depth, from the Clark vein to the No. 4 Dunmore vein, located about 700 feet east of Central main shaft. This shaft was completed during the year, and operations commenced in the Dunmore vein.

Central Boiler Plant.—The work of installing six new Maxim boilers, with a total of 3,500 horse power, is now in progress and nearly completed.

Dodge.—Main shaft sunk from Big vein to Dunmore vein and also general improvements made in breaker.

Electrical Machinery Installed

Pyne.—One 300 K. W. rotary converter, and an addition to the sub-station building to house the same, one 6½ ton electric locomotive in Clark vein, one 6½ ton electric locomotive in Big vein.

Archbald.—Two 6½ ton electric locomotives to operate on Rist and Rossars gangways in Big vein.

Continental.—One 300 K. W. rotary converter located on top of the Dunmore vein slope, one 6½ ton electric locomotive to operate in the Dunmore vein.

Hyde Park.—One 300 K. W. rotary converter with addition to sub-station to house the same. One 300 K. W. rotary converter taken away from this colliery and installed at the Central Water shaft for Sloan New County vein.

Three 6½ ton electric locomotives to operate in the New County and Dunmore veins. One Jeffrey rock crusher and foundation, to crush all rock and bone coming from the breaker in order to flush the same into the mines.

Hampton.—Three 6½ ton electric locomotives in the Diamond and Rock veins.

CONDITION OF COLLIERIES

DELAWARE, LACKAWANNA AND WESTERN RAILROAD COMPANY

Archbald.—Ventilation, drainage and condition as to safety, good.

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

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

Hampton.—Ventilation, drainage and condition as to safety, good.

Sloan.—Ventilation in Sloan Surface vein is only fair. A new air-shaft is being sunk to improve this condition. Otherwise, the ventilation, drainage and condition as to safety are good.

Bellevue.—Ventilation, drainage and condition as to safety, good.

Dodge.—Ventilation, drainage and condition as to safety, good.

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

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

HUDSON COAL COMPANY

Greenwood.—The ventilation where fans are in use is good. In the openings where natural causes are depended upon the quantity is a variable one, but sufficient to maintain a healthy condition. Drainage fair; condition as to safety, good.

SCRANTON COAL COMPANY

Capouse.—Ventilation, drainage and condition as to safety, good.

PEOPLES COAL COMPANY

Oxford.—Ventilation and drainage fair; condition as to safety, good.

MINOOKA COAL COMPANY

Minooka.—Ventilation, drainage and condition as to safety, good.

CARLETON COAL COMPANY

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

IMPROVEMENTS

DELAWARE, LACKAWANNA AND WESTERN RAILROAD COMPANY

Archbald Colliery.—All the inside buildings reconstructed of incombustible material.

Continental Colliery.—The 12'x4'x4' ventilating fan was replaced by a new 24'x8'x6' fan, which was put into operation March 20. All the inside buildings reconstructed of incombustible material.

Hyde Park Colliery.—A 7'x12' tunnel, 220 feet long, was driven from the Rock to the Diamond vein. All the inside buildings reconstructed of incombustible material.

Hampton Colliery.—All the buildings reconstructed of incombustible material.

CONDITION OF COLLIERIES

DELAWARE, LACKAWANNA AND WESTERN RAILROAD COMPANY

Sloan Colliery.—Ventilation in Sloan Surface vein good. A new air shaft has been sunk to improve the conditions.

Bellevue, Archbald, Hyde Park, National, Dodge, Holden and Continental Collieries.—Ventilation, drainage and condition as to safety good.

HUDSON COAL COMPANY

Greenwood Nos. 1 and 2 Collieries.—The ventilation where fans were in use was good. In the openings where natural causes were depended upon, the quantity was a variable one, but sufficient to maintain a healthy condition. Drainage fair. Condition as to safety, good.

SCRANTON COAL COMPANY

Capouse Colliery.—Ventilation, drainage and condition as to safety good.

PEOPLE'S COAL COMPANY

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

CARLETON COAL COMPANY

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

MINOOKA COAL COMPANY

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

IMPROVEMENTS

DELAWARE, LACKAWANNA AND WESTERN RAILROAD COMPANY

Bellevue Colliery.—New annex to breaker under construction. Installed railing around all dangerous parts of machinery. Built a new annex to the breaker, which will clean all of the small sized coal, from pea coal down, and installed in this annex all modern machinery and proper safety appliances, which will greatly decrease accidents caused by coming in contact with exposed machinery. A Welch automatic overwind or engine stop was installed on supply shaft engine.

Archbald Colliery.—All the inside buildings reconstructed of incombustible material. A tunnel 134 feet long was driven to redeem pillars from Rock vein to Diamond vein. An automatic overwinding device was attached to hoisting engine.

Sloan Colliery.—The new air shaft was sunk a distance of 640 feet to No. 3 Dunmore. Installed a fan 24 by 8 by 6. An automatic overwinding device was attached to hoisting engines.

Sloan Colliery.—Outside:—Installed an auxiliary line between Hampton and Sloan mines.

Archbald Colliery.—Completed a bore hole from surface to New County vein, and changing cable.

Installed one Goodman coal-cutting machine in the Diamond vein; also four 7-ton locomotives with reel devices, etc.

Outside:—Installed one rotary converter, transformer, switch-board; changing equipment in sub-station.

Continental Colliery.—Installed one 7-ton electric locomotive, with reel, etc., in Dunmore No. 3 vein, also one Goodman coal-cutting machine.

Outside:—Built a new washhouse.

National Colliery.—Installed one motor in Dunmore No. 1 vein and an endless rope at foot of shaft in No. 2 Dunmore vein.

Outside:—Built stairway, railings, etc., around boilers.

SCRANTON ANTHRACITE COAL COMPANY

Oak Hill Colliery.—Completed a new slope to the No. 2 Dunmore vein. Built an addition to the breaker.

SPRUKS COAL COMPANY

East Mountain Colliery.—Inside:—Installed an electric hoist.

Outside:—Installed one 12 HP. gasoline engine and built an engine house for same. Built a new office and scale house, mule barn, hospital with equipment, and track and trestle from breaker to Erie tracks, and a set of coal pockets for storing coal for delivery.

Sunk an air shaft.

CONDITION OF COLLIERIES

DELAWARE, LACKAWANNA AND WESTERN RAILROAD COMPANY

Bellevue, Dodge, Archbald, Continental, Sloan and National Collieries.—Ventilation, drainage and condition as to safety, good, except in a few places where conditions should be improved.

HUDSON COAL COMPANY

Greenwood Colliery.—Ventilation, drainage and condition as to safety, good.

SCRANTON ANTHRACITE COAL COMPANY

Oak Hill Colliery.—Ventilation and drainage, good. Condition as to safety, fair.

CARLETON COAL COMPANY

Carleton Colliery.—Ventilation and drainage, good. Safety conditions, fair.

SPRUKS COAL COMPANY

Spruks Colliery.—Ventilation and drainage, good. Safety conditions, fair.

JOHN GIBBONS COAL COMPANY

Gibbons Colliery.—Ventilation and safety conditions, fair. Drainage, good.

IMPROVEMENTS

DELAWARE, LACKAWANNA AND WESTERN RAILROAD COMPANY

Bellevue Colliery.—Completed two rock tunnels from New County vein to Big vein, each 200 feet long, on a grade of 5 per cent. Erected a new engine and rotary house, of brick, with concrete roof.

Archbald Colliery.—Completed a rock plane from New County vein to Big vein.

Continental Colliery.—Completed a rock tunnel from Rock vein to Diamond vein.

Sloan Colliery.—Completed a rock tunnel from No. 2 Dunmore vein to No. 1 Dunmore vein, 500 feet in length.

Hampton Washery.—Installed two Simplex jigs.

HUDSON COAL COMPANY

Greenwood Colliery.—Installed a car pull at the coal tipple; a lump coal shaker in the breaker; also stationary hoist at No. 2 shaft to eliminate mule haul. A new addition was built to the office building. Completed a connection from No. 1 shaft to No. 2 shaft for water, which eliminates the danger of No. 2 shaft being flooded in case of high water.