

At their Ontario Colliery the Blue Ridge shaft has been sunk from the Clark to the Dunmore vein, a distance of 90 feet, cutting 4 feet of very fine coal.

At **Raymond** Colliery, Archbald, a second shaft has been sunk to the Rider or New County vein, and equipped with a 22 horse power gasoline engine, driving a ten-foot fan.

Delaware, Lackawanna and Western Railroad Company

Storrs Mines.—An electric motor system has been installed. Four motors at Storrs No. 1. Three motors at Storrs No. 2. Two motors at Storrs No. 3.

Also two generators to furnish power for Storrs Nos. 1 and 2, and one generator at Storrs No. 3.

A washery annex, with a capacity of 500 tons daily.

Also three steel towers, one each at Storrs Nos. 1, 2 and 3.

Mine Foremen's Examinations

The annual mine foremen and assistant mine foremen's examinations were held at Carbondale, October 8 and 9. Thirty-seven persons were recommended for mine foremen's certificates, and 24 for assistant mine foremen's certificates.

Mine Foremen

George Smith, Wm. E. Lewis, Aneirin L. Morgan, Joseph A. Scharar, Wm. Pugh, George Imes, Thomas Lewis, David J. Llewellyn, Evan H. Evans, David G. Thomas, Edward Lewis, John Sirwatka, Theobald Field, Gomer Parry, James Jones, Benjamin F. Bowen, David S. Jones, Patrick Parks, Solomon Jones, Patrick J. O'Hara, Walter H. Vizzateard, John Morgan, John Moore, Patk. B. Gilmartin, John H. Bexon, David A. Beynon, Thomas C. Harvey, Ivor E. Davies, Patk. J. McAndrew, George E. Maxey, Charles Richards, John J. Benschaw, Joseph Vickers, Arthur C. LaMonte, Thomas Haddock, George C. Knight, Thomas Sullivan.

Assistant Mine Foremen

William D. Johns, George Evans, John T. Watkins, David Parry, Charles J. Arnold, Phillip W. Foster, John V. Fadden, Thomas Woods, Robert Reid, Wm. Rooke, Edward Reid, Thomas Robinson, Wm. P. Kelly, John Elderkin, Joseph Rafferty, David J. Davies, Wm. I. Richards, Thomas Taylor, Wm. J. Williams, Wm. Miles, John F. Jones, Jacob Evans, William A. Stephens, Wm. J. Davies.

Condition of Collieries

The mines in this district are in a safe condition. As to ventilation and drainage, I report the following:

Scranton Coal Company

Johnson No. 1.—Dunmore vein gives off some gas, and for this reason the ventilation is good. Diamond vein is practically a non-gaseous seam; the ventilation is fair, but was being improved on my last inspection.

Johnson No. 2.—This is a non-gaseous mine. A large portion of it is dependent upon natural ventilation, and for this reason the ventilation is bad for a few days at a time, particularly when the weather changes. The officials have done everything in their power to improve this condition. By placing doors on all chambers they have greatly improved the conditions.

Raymond.—The mining at this colliery consists principally in taking down what is called "top coal" in abandoned chambers, and while it would be impracticable to establish a systematic arrangement of air currents on account of the openness of the workings, the men are well provided with pure air. This is due to the unusual thickness of the vein at this locality, and the arranging of small groups of men at different places throughout the mine.

The haulage and drainage at this colliery are in excellent condition. Much attention is paid to maintaining room along tracks, and keeping the roads surfaced with ashes.

Ontario.—The veins at this colliery are very thin. The ventilation is good. The connecting of Jermyn No. 6 and Klondyke workings, has improved the ventilation, haulage and drainage considerably.

On account of the thinness and irregularity of these veins, it requires tact and good judgment to successfully mine them, and their condition is the best endorsement of the management.

Richmond No. 3.—This colliery has seen a complete reformation during the year. The ventilation has been very much improved, the roads cleaned, with ample room for the handling of cars, and the colliery throughout is in a very satisfactory condition.

Riverside.—Mining in the lower vein at this colliery is not very extensive, but one of the upper veins is being developed.

Richmond No. 4.—Operations at this colliery are not in any way extensive, but the ventilation is good.

Delaware and Hudson Company

Coal Brook Colliery.—On December 1, a mine fire was discovered under the culm bank in the workings of the Coal Brook tunnel that had been abandoned some forty years ago.

When these mines were opened, the robbing of pillars was one of the important considerations, and with this in view a system of mining was adopted which has been strictly adhered to. An engineer was kept at the mines, to put up all chamber lines, and see to it that they were driven accordingly.

All chamber roads, gobs and props, conform strictly with the engineer's lines, the road being on one side, and the general success attending the mining at this colliery, is the best evidence of the successful methods there in vogue.

While the robbing of pillars is such an important part of the work at these mines, it can be said that not a single accident can be attributed to it.

Clifford Colliery.—The ventilation is, and has been, undergoing a thorough overhauling, and will soon be in a satisfactory condition.

Glenwood.—The ventilation is in fair condition; they are robbing pillars in a thick vein, and on this account it is very difficult to maintain systematic ventilation, but the employes do not suffer in any way for the want of air.

TEMPLE IRON COMPANY

Lackawanna.—The chambers of this mine are well ventilated, and have been very much improved lately. A new shaft is being sunk, which will improve their haulage and do away with using the main haulages as return, which, under present conditions, would be impossible.

Northwest.—The ventilation is fair; they are robbing pillars in a thick vein, but the men appear to have a full and adequate supply of air.

NORTH END COAL COMPANY

North End.—This mine has been under development, and is not sufficiently far advanced to be considered.

Improvements

SCRANTON COAL COMPANY

At the Johnson colliery a 30 foot Guibal fan has been installed as an alternate to the present fan now in use, which fully meets the requirements of this gaseous colliery.

The engine room and fan drift are built of substantial masonry, and the arrangement of operating the doors that turn the air currents to either fan, is very effective and complete.

At **Raymond** Shaft a 250 horse power locomotive boiler has been set up in addition to the present equipment. This will do away

with the old drift fire room, and be a considerable saving in fuel with improved service.

At Ontario a slope has been sunk from the tunnel level, to take out the pillars and some solid coal from the Ontario tunnel workings.

A Scranton duplex plunger pump 18x8x18 has been installed in the above slope.

The working of the old Jermyn No. 6 has been connected to the Klondyke working by tunnel, which made it possible to abandon the Jermyn No. 6 shaft, and favored the haulage of these two mines so that coal and water are delivered to one surface opening by gravity. This was a great saving to the colliery; it improved the service and was a good move in mining.

On May 7, the tower and fan house of the Blue Ridge opening were destroyed by fire; the effect on production was only temporary, and the buildings were rebuilt as soon as possible.

At Richmond No. 3, a gravity plane 700 feet long, running four cars on each track, was built in the Clark vein, which will deliver coal from a newly acquired tract.

DELAWARE AND HUDSON COMPANY

At Coal Brook colliery, a rope haulage 6,300 feet long, has been installed, delivering coal to surface from Coal Brook tunnel. It is an up to date haulage; great care was exercised in the alignment, and there is ample room along the track everywhere.

An electric plant of 450 Kilowatt capacity has been installed at this same colliery, furnishing light for the Company's Carbondale railroad yard, lighting the coal taken outside, and furnishing power for three fans where it was quite impracticable to use steam as a power.

The engine room is a substantial brick building with a concrete floor. The equipment and building present a substantial appearance.

DELAWARE, LACKAWANNA AND WESTERN RAILROAD COMPANY

At the Storrs colliery, the wooden towers at Shafts Nos. 1, 2 and 3, have been replaced by substantial steel towers.

A rock slope 300 feet long has been sunk, to connect the Big and New County veins in No. 1 shaft.

The 25 pound rail track on nearly all main headings, has been re-laid with heavier rails, using the lighter rails in the chambers where motors with reel attachments haul cars.

In relaying tracks, great care was taken to modify grades and curves, also to provide more room along tracks.

Erie Colliery.—A slope is being driven in the New County vein 6x12 feet in area, from head of Rock Plane towards the basin; its length is now 400 feet. Two 10x18 hoisting engines, formerly used in the Clark vein, have been installed, and the slope is continuing toward the outcrop as an engine plane. A 7½ ton chamber haulage electric motor has been installed on the west rise in New County vein. Ventilation good, drainage and safety fair.

Glenwood Colliery.—A Jeanesville Duplex Plunger pump, 24x12x-18, has been installed, delivering water from Clark vein to surface. Condition of colliery, fair.

SCRANTON COAL COMPANY

Raymond Colliery.—The main shaft was sunk from the Clark vein to the Dunmore vein, a distance of 90 feet, cutting a vein 3½ feet of coal of good quality. Two slopes have been sunk to the New County vein, thereby increasing the output of that vein. The general condition of the colliery is good.

Riverside Colliery.—Condition fair.

Black Diamond Colliery.—Ventilation good, other conditions, fair.

NORTHWEST COAL COMPANY

Northwest Colliery.—Ventilation, bad. Other conditions, fair.

FINN COAL COMPANY

Finn Colliery.—General condition, fair.

CARBONDALE COAL MINING COMPANY

Carbondale.—New slope in progress of sinking from surface to Dunmore vein; length at present 150 feet. General condition, fair.

MORSS HILL COAL COMPANY

Morss Hill Colliery.—Installed two Lehigh jigs with 20 horse power upright engines for operating same. One new 150 horse power tubular boiler; one 50 ton track scales enlarged screen and shaker capacity. Re-timbered the breaker; built new mule barn, blacksmith shop and oil house; new railroad switch from Erie main line to breaker. Inside.—New slope from surface to 3 feet vein. The condition of mine improved generally.

NORTHEAST COAL COMPANY

Northeast Colliery.—A new breaker erected, equipped with the latest improved machinery; capacity 600 tons daily. Two new boilers, tubular type, 90 horse power each, new boiler-room, office and weigh scales, new 12 foot ventilating fan, Guibal type. Condition of mine, fair.

CLINTON FALLS COAL COMPANY

Clinton Falls Colliery.—General condition of mine, fair.

SUNNY SIDE COAL COMPANY

Sunny Side Colliery.—General condition of mine, fair.

EAST MOUNTAIN COAL COMPANY

East Mountain.—Condition of mine, fair.

Jermyn Colliery.—Plane in Grassy vein driven 800 feet. Plane in Archbald vein extended 600 feet. Rope haulage in Archbald vein extended 2,200 feet. A 17 foot Guibal fan has been built to ventilate the Grassy vein. A Dickson engine, 16 by 30 inch cylinder, operates the fan. An 8-inch bore hole driven 147 feet from the surface to the Archbald vein to convey steam to operate fan on the surface.

White Oak Colliery.—Tail rope haulage in Dunmore vein straightened and graded for a distance of 1,600 feet. No. 2 slope Dunmore vein extended 400 feet. Tunnel in Dunmore vein driven through fault 150 feet. No. 6 Tunnel re-opened, and 2,200 feet of tracks laid to operate it. No. 8 Tunnel to Dunmore vein re-opened and tracks laid preparatory to robbing.

HILLSIDE COAL AND IRON COMPANY

Eric Colliery.—A two-story building of reinforced concrete 29 x 74 feet was erected for storehouse purposes. Three tubular boilers were installed equal to 300 horse power, or 1,200 in the aggregate. One 7½ ton electric motor. West side steam plane extended 400 feet. East side plane extended 1,400 feet. One 6-inch bore hole from surface to the Grassy vein for slushing purposes to recover pillars.

SCRANTON COAL COMPANY

Raymond Colliery.—The Raymond shaft has been sunk from the Clark to the Dunmore vein, a distance of 86 feet, cutting a four foot vein of excellent coal. The second opening has also been sunk from and to the same vein.

TEMPLE IRON COMPANY

Northwest Colliery.—An air shaft was sunk to Mills vein, a distance of 32 feet. A Guibal fan was erected on this shaft 20 feet in diameter for ventilation. It is driven by an electric motor. A 75 K. W. generator driven direct by a Taylor-Chandler engine was installed to generate current to supply the motor.

HUMBERT COAL COMPANY

Sunnyside Colliery.—A new vein of coal has been opened near top of mountain about 2,000 feet from the breaker. A new mule barn and a fireproof stone powder house were erected. Additional railroad tracks have been laid in order to meet the increased capacity of the colliery.

MORSS HILL COAL COMPANY

Morss Hill Colliery.—A slope was sunk from the surface to top vein, a distance of 125 feet, the average pitch twenty degrees and a steam hoist was installed. Water way was driven to Third vein. The breaker and trestle thoroughly repaired and new breaker engine, jigs, screen, etc., installed. A 65 K. W. generator, electric hoist, two motors for shop purposes and a complete system of electric lighting for breaker and offices were installed.

7 feet x 12 feet in area, was driven from Bottom to Third vein and equipped with a 65 H. P. electric hoist. A rock plane, 150 feet in length and 7x12 feet in area, was driven from Top to Grassy vein to improve ventilation. A drift, 7 feet x 12 feet in area and 200 feet in length, was driven from the surface to Third vein, and a 10-foot diameter fan installed driven by electricity.

Powderly Colliery.—At No. 1 tunnel a fan 10 feet in diameter, driven by a 35 H. P. electric engine, was installed for ventilating Third vein. A tunnel, 7 feet x 12 feet in area and 150 feet in length, was driven through a fault in the Top vein. The haulage 1,200 feet in length was converted into an electric motor road. A fan 10 feet in diameter, driven by electricity, was installed to ventilate No. 1 Slope. A 21-ton electric motor transports the coal from No. 1 Carbondale to Powderly breaker. 3,500 feet of rope haulage operated by a 12x15 double drum engine installed for Eastside coal.

Jermyn Colliery.—Norwalk air compressor transferred from Coal Brook. Rock plane, 500 feet in length and 7 feet x 12 feet in area, driven from Bottom to Top Split Grassy vein. Rock slope from surface to Clark vein 7x12 feet in area and 180 feet in length.

White Oak Colliery.—Foundations for new breaker completed. Brick boiler house 88 feet x 50 feet, containing 4 Sterling 300 H. P. boilers, was finished. Built blacksmith shop 36 feet by 24 feet; car shop 48 feet x 30 feet; and supply house 20 feet x 40 feet. No. 6 engine plane extended 500 feet, operated by 14-inch x 20-inch engine. Drove manway for No. 3 Slope 200 feet and concreted top, bottom and sides.

HILLSIDE COAL AND IRON COMPANY

Erie Colliery.—A new culm scraper line has been installed between Erie washery and the old Keystone culm bank, for the purpose of conveying the same to the washery for preparation.

A new concrete building has been erected for storing lime, cement, feed and hay.

Two air compressors have been installed within a corrugated iron building, adjoining the fire room, the compressed air to be used for drilling the rock in New County vein.

A new concrete mule barn of twenty stalls, feed room, etc., has been constructed near the foot of Erie shaft, replacing the outside barn on West Side.

A Sullivan undercutting coal machine has been installed in the New County vein, East Side. Several new counter headings have been completed in this section, doing away with less satisfactory haulage roads.

Considerable culm has been slushed into the Clark vein workings underneath the Lackawanna River.

SCRANTON COAL COMPANY

Riverside Colliery.—Two large locomotive type boilers were installed, displacing nine old cylinder boilers.

Raymond Colliery.—Breaker burned down January 22, 1911, and replaced by a modern breaker of 1,000 tons capacity. The new breaker, which resumed operations December 4, is equipped with the latest improved machinery for the preparation of coal, and has an annex where all the smaller sizes down to No. 3 buck is prepared.

It is lighted by electric lamps, a small engine and dynamo being installed for that purpose. A large water tank has been erected, capacity 50,000 gallons, and connected to the water main. A powerful pump is connected to the tank, and pipes carried to every part of the breaker and annex. This pump is continually under steam, and by simply turning a valve can flood every department of the breaker in a few minutes. A rock slope was driven from the Clark vein to the surface, a distance of 300 feet, on a pitch of 33 degrees. This concentrates the pumping plant at this point and also furnishes an additional second opening.

Black Diamond Colliery.—Abandoned January 19, 1911, the coal being exhausted. The breaker was torn down and the machinery removed to other collieries.

BREAKERS DESTROYED BY FIRE DURING THE YEAR

The production of coal in the First District for the year 1911 was reduced somewhat, owing to the destruction by fire of three breakers. The **Raymond** breaker of the Scranton Coal Company, was destroyed by fire January 22, and the colliery—a large producer— was idle until December 4.

The Morss Hill breaker of the Morss Hill Coal Company, was destroyed by fire July 27, which left the colliery idle the balance of the year. The company has not commenced to erect a new breaker to take the place of the one destroyed by fire, but expects to do so in the near future.

The Sunset breaker of the Ainsley Coal Company was destroyed by fire May 17, and no steps have been taken to erect a new one. This colliery is a small operation and did not ship any coal during the year.

The Spring Hill Colliery of the Spring Hill Coal Company shut down the first of January, and later on was leased to Watkins and Sons, who have been doing some developing of the property and operating on a small scale at intervals during the year.

CONDITION OF COLLIERIES

DELAWARE AND HUDSON COMPANY

Olyphant, Coal Brook, Powderly, Jermyn and Gravity Slope.—Ventilation, roads, drainage and condition as to safety, good.

TEMPLE COAL COMPANY

Sterrick Creek.—Ventilation, roads, drainage and condition as to safety, good.

SCRANTON COAL COMPANY

Raymond.—Ventilation, roads, drainage and condition as to safety, good.

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

HILLSIDE COAL AND IRON COMPANY

Erie.—Ventilation, roads, drainage and condition as to safety, fair.

ARCHBALD COAL COMPANY

Tappans.—Ventilation, roads, drainage and condition as to safety, fair.

HUMBERT COAL COMPANY

Sunnyside.—Ventilation, roads, drainage and condition as to safety, fair.

WEST MOUNTAIN COAL COMPANY

West Mountain.—Ventilation, roads, drainage and condition as to safety, good.

FALLBROOK COAL COMPANY

Murrins.—Ventilation, roads, drainage and condition as to safety, fair.

IMPROVEMENTS

DELAWARE AND HUDSON COMPANY

Olyphant Colliery.—Completed wash house, 110 feet long 20 feet wide, equipped with 24 shower baths and 224 lockers.

Installed new boiler plant on East side, comprising one battery of Sterling boilers to produce 540 H. P. for use in handling coal on the planes of the several veins in this vicinity.

Started to place one pair of 14 inch by 20 inch Florey type and one pair of 18 inch by 36 inch Dickson hoisting engines adjacent to new boiler plant, to handle coal on plane No. 14 New County vein and plane No. 3 in the Dunmore vein.

Finished rock plane 450 feet from the Clark vein to the New County vein. Drove rock plane 275 feet from New County to Fourteen Foot vein, east of No. 2 shaft, to facilitate handling coal from Fourteen Foot vein.

SCRANTON COAL COMPANY

Raymond Colliery.—Two Maxim water tube boilers, capacity 300 H. P. each are being installed. This work will be completed early in the year 1915.

14 plane, New County vein, Grassy Island No. 2 shaft. Installed one 18 by 36 inch Dickson first motion hoisting engine on surface, Dunmore vein, No. 4 plane, Grassy Island No. 2 shaft.

Coal Brook Colliery.—Outside: Changed main and steamboat rolls to slow-gearred rolls. Installed in the power plant a 1600 KVA 2300 volt, 25-cycle, 3-phase, G. E. generator, with a 28 by 44 by 42 Hamilton-Corliss compound non-condensing engine, and one 600 KW G. E. frequency changer, changing 25 cycle to 60 cycle, 2300 volts, 3-phase.

Powderly Colliery.—Outside: Installed 6 Wilmot jigs in the east end of the breaker. Equipped each of the six boilers in boiler plant with Coppus blowers.

Jermyn Colliery.—Outside: Boiler plant was enlarged by the installation of 926 HP B. and W. Stirling boilers. An electric hoist was installed No. 8 plane, 730 HP, 250 volt, direct current. Also installed one 250 G. E. Co. 250 KW, 250 volt D. C. belt driven generator, and a 22 by 22 McEwen engine in power house. Installed one Joplin jig in washery.

SCRANTON COAL COMPANY

Raymond Colliery.—Two 300 horse power boilers were installed.

HILLSIDE COAL AND IRON COMPANY

Erie Colliery.—A rock tunnel, 7 feet by 12 feet and 400 feet in length, was driven from the Clark vein to the New County vein, to facilitate inside transportation. Many of the motor roads have been regraded.

ARCHBALD COAL COMPANY

Tappans Colliery.—No. 2 New County slope has been extended a distance of 2500 feet on a gradient of 7 degrees, and two rock slopes were driven from this slope a distance of 300 feet, each, to reach the coal in the Dunmore veins on the Archbald anticlinal. A new slope has been started in the Dunmore vein and is now down a distance of 200 feet on a gradient of 4 degrees.

MINE FOREMEN'S EXAMINATIONS

The annual examination of applicants for certificates of qualification as mine foremen and assistant mine foremen, was held in Watt's Hall, Carbondale, May 18 and 19. The Board of Examiners was composed of P. J. Moore, Mine Inspector, Carbondale; Richard Beer, Engineer, Carbondale; John F. Boland, Miner, Carbondale; David Evans, Miner, Olyphant.

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

MINE FOREMEN

Frank J. Hevers, John J. Ford, Patrick J. O'Rourke, Michael F. Brennan, Martin F. Murphy, Archbald; William Loftus, Olyphant; Thomas H. Williams, Carbondale; Patrick J. Murray, Peckville; Martin J. Loftus, Jessup.