

by a system of rope-haulage, sectional area of slope is 6'x12' equal 72 square feet.

*Jermyn No. 1 shaft.*—Finished new plane 400' long on a grade of 1' in 5'.

*No. 1 shaft, Carbondale.*—New tunnel driven from daylight to top coal 550' long, sectional area 63 square feet.

*White Oak mines.*—Opened up old No. 5 mines by means of two tunnels one 300' long, sectional area equal 60 square feet; also, another 100' feet long, area of opening 56 square feet; these openings are made to the Archbald vein of coal.

OFFICE OF THE PENNSYLVANIA COAL COMPANY,  
DUNMORE, PA., February 8, 1890.

MR. PATRICK BLEWITT:

DEAR SIR: The following are some of the improvements made during the year ending December 31, 1889:

*No. 5 shaft.*—A slope was started from northeast heading in second vein (First Dunmore) angle of slope located about 250' from shaft landing in this seam, we drove slope in vein on north 50 west course for a distance of 900' at which point we encountered a fault. The width of fault was ascertained by boring from top or Clark vein, and the slope again resumed in rock same course as above mentioned, and on a grade of 1' in 20', for a distance of 160', at which point we again opened up vein. The slope will terminate at the lower one, west end of Wilkins' tract. One pair small engines 40 horse-power, Pennsylvania Coal Company's make, located between heading and angle of slope will be used to hoist the coal. The plane on northeast side of shaft in third seam was finished and put in successful operation in February, 1889. The one in second seam was finished in June.

*No. 1 shaft.*—We resumed operations at this shaft in November, since which time we have been trying to increase the length of our headings and the capacity of lodgment.

*Bunker Hill No. 1.*—This new working is situated on line of Taylor tract near end of the E. & W. V. truss and about 600' east of Roaring Brook. At or near the point at which the shaft is sunk, a tunnel had been driven (about thirty-five years ago) into what is known as the Dunmore middle vein, and from this tunnel two narrow passages were driven in coal, one to the rise, south 39° east, and abandoned in coal, the other driven to daylight on a course of south 7° west. At this point, a furnace has been built for the purpose of ventilating this seam, our second opening will also be at this point. The shaft is 44' 8" deep and sunk to the Dunmore bottom vein. A second opening to shaft workings has been made close to the bank of Roaring Brook and almost directly under the track of the E. & W. V. railroad, driven in the coal of the Dunmore bottom vein about 500' feet east of shaft. The coal from both shaft and tunnel will be hoisted to an elevation of 30' above sur-

face at shaft and roadbed of tunnel, at which point it is dumped and the coarse coal separated from the fine, the coarse coal to be shipped direct to market and the fine to Bunker Hill breaker. A 90 horse-power engine will be used for hoisting the coal. Three boilers are in place, each 36' long and 30" diameter for the present furnish sufficient steam for hoisting and for one No. 4 Knowls pump at bottom of shaft.

Yours, very respectfully,

JAMES YOUNG,  
*Mine Superintendent.*

*Capouse shaft, Lackawanna Iron and Coal Company.*—Have constructed a new plane between G and Rock veins 369' long; sectional area equal 96 square feet and on an angle of 15°.

*Pine Brook shaft.*—Finished plane 1,500' long; sectional area, 6'x14', equal 84 square feet on a pitch of 15°.

*Clifford shaft.*—Finished one new plane 887' long; sectional area equal 72 square feet on an angle of 6°.

*Forest City mines.*—Finished a new slope 400' long; sectional area, 84 square feet on an angle of 9°.

*Glenwood mines.*—Constructed a slope 400' long; sectional area, 48 square feet on an angle of 14°.

*Keystone tunnel.*—Finished a new plane 1,100' long; sectional area equal 98 square feet on a pitch of 7°.

*Elk Creek drifts.*—Constructed a plane 80' long; sectional area, 5'x16', equal 80 square feet on an angle of 38°.

*Eaton tunnel.*—Extended slope 500 feet; sectional area, 6'x14', equal 84 square feet on a dip of 1 in 9.

*Edgerton Coal Company* is opening a new drift into bottom coal  $1\frac{7}{8}$  miles north of Edgerton No. 2, close to where the old Hendricks breaker stood and on the same tract of land.

*Dolph tunnel.*—Finished plane No. 5, 525' long and on a pitch of 3°; also plane No. 6, 300' long on an angle of 3½°.

*Grassy Island colliery.*—Sunk second opening shaft from Grassy island to Clark vein, a depth of 157' feet; sectional area, 308 square feet; also new air shaft for drift workings and built a new furnace.

*Jermyn No. 3 slope.*—This colliery is located in Dickson City borough about 2,000' northwest of Jermyn shaft No. 4; it consists of a slope and breaker; the slope is sunk. From surface to first vein of coal is 600' and to second vein of coal 800'. It is connected with mine workings of Jermyn No. 4 and is ventilated at present by the fan at Jermyn No. 4. They are sinking a fan shaft northeast from mouth of slope; it is now down about 175'; they are also erecting a fan. The breaker is new and located 200' southeast of slope mouth; it has a capacity of 1,000 ton of coal per day and is furnished with all the modern improvements.

*Lackawanna shaft.*—Finished a plane 300' long; sectional area, 8'x18'

TABLE I—Showing Names of Operators, etc., and Location of Collieries in the Second Anthracite District for 1899.

Names of Collieries.	County.	Name of Operator.	Name of General Superintendent.	Postoffice Address.
Del., Lack. and West. R. R. Co.				
Archbald, .....	Lackawanna, .....	Dela., Lacka. and Western R. R. Co.,	E. E. Loomis, .....	Scranton, Pa.
Bellevue shaft, .....	Lackawanna, .....	Dela., Lacka. and Western R. R. Co.,	E. E. Loomis, .....	Scranton, Pa.
Bellevue slope, .....	Lackawanna, .....	Dela., Lacka. and Western R. R. Co.,	E. E. Loomis, .....	Scranton, Pa.
Brisbin, .....	Lackawanna, .....	Dela., Lacka. and Western R. R. Co.,	E. E. Loomis, .....	Scranton, Pa.
Cayuga, .....	Lackawanna, .....	Dela., Lacka. and Western R. R. Co.,	E. E. Loomis, .....	Scranton, Pa.
Sloan, .....	Lackawanna, .....	Dela., Lacka. and Western R. R. Co.,	E. E. Loomis, .....	Scranton, Pa.
Central, .....	Lackawanna, .....	Dela., Lacka. and Western R. R. Co.,	E. E. Loomis, .....	Scranton, Pa.
Continental, .....	Lackawanna, .....	Dela., Lacka. and Western R. R. Co.,	E. E. Loomis, .....	Scranton, Pa.
Dodge, .....	Lackawanna, .....	Dela., Lacka. and Western R. R. Co.,	E. E. Loomis, .....	Scranton, Pa.
Diamond, .....	Lackawanna, .....	Dela., Lacka. and Western R. R. Co.,	E. E. Loomis, .....	Scranton, Pa.
Tripp shaft, .....	Lackawanna, .....	Dela., Lacka. and Western R. R. Co.,	E. E. Loomis, .....	Scranton, Pa.
Tripp slope, .....	Lackawanna, .....	Dela., Lacka. and Western R. R. Co.,	E. E. Loomis, .....	Scranton, Pa.
Tripp drift, .....	Lackawanna, .....	Dela., Lacka. and Western R. R. Co.,	E. E. Loomis, .....	Scranton, Pa.
Hyde Park, .....	Lackawanna, .....	Dela., Lacka. and Western R. R. Co.,	E. E. Loomis, .....	Scranton, Pa.
Manville, .....	Lackawanna, .....	Dela., Lacka. and Western R. R. Co.,	E. E. Loomis, .....	Scranton, Pa.
Oxford washery, .....	Lackawanna, .....	Dela., Lacka. and Western R. R. Co.,	E. E. Loomis, .....	Scranton, Pa.
Holden, .....	Lackawanna, .....	Dela., Lacka. and Western R. R. Co.,	E. E. Loomis, .....	Scranton, Pa.
Hampton, .....	Lackawanna, .....	Dela., Lacka. and Western R. R. Co.,	E. E. Loomis, .....	Scranton, Pa.
Pyne, .....	Lackawanna, .....	Dela., Lacka. and Western R. R. Co.,	E. E. Loomis, .....	Scranton, Pa.
Taylor shaft, .....	Lackawanna, .....	Dela., Lacka. and Western R. R. Co.,	E. E. Loomis, .....	Scranton, Pa.
Taylor drift, .....	Lackawanna, .....	Dela., Lacka. and Western R. R. Co.,	E. E. Loomis, .....	Scranton, Pa.
Austin Coal Co.				
Austin tunnel, .....	Lackawanna, .....	Austin Coal Co., .....	W. G. Robertson, .....	Scranton, Pa.
Delaware and Hudson Co.				
Dickson, .....	Lackawanna, .....	Delaware and Hudson Co., .....	C. C. Rose, .....	Scranton, Pa.
Von Storch slope, .....	Lackawanna, .....	Delaware and Hudson Co., .....	C. C. Rose, .....	Scranton, Pa.
Von Storch shaft, .....	Lackawanna, .....	Delaware and Hudson Co., .....	C. C. Rose, .....	Scranton, Pa.
Manville, .....	Lackawanna, .....	Delaware and Hudson Co., .....	C. C. Rose, .....	Scranton, Pa.
Scranton Coal Co.				
Pine Brook, .....	Lackawanna, .....	Scranton Coal Co., .....	John R. Bryden, .....	Scranton, Pa.
Capouse, .....	Lackawanna, .....	Scranton Coal Co., .....	John R. Bryden, .....	Scranton, Pa.
Mt. Pleasant Coal Co.				
Mt. Pleasant, .....	Lackawanna, .....	Mt. Pleasant Coal Co., .....	James B. Neale, .....	Scranton, Pa.
Green Ridge Coal Co.				
Green Ridge slope, .....	Lackawanna, .....	Green Ridge Coal Co., .....	William L. Connell, .....	Scranton, Pa.
Pennsylvania Coal Co.				
No. 5 shaft, .....	Lackawanna, .....	Pennsylvania Coal Company, .....	George B. Smith, .....	Dunmore, Pa.
Bunker Hill, .....	Lackawanna, .....	Pennsylvania Coal Company, .....	George B. Smith, .....	Dunmore, Pa.
Old Forge No. 1 shaft, .....	Lackawanna, .....	Pennsylvania Coal Company, .....	George B. Smith, .....	Dunmore, Pa.
Old Forge No. 2 shaft, .....	Lackawanna, .....	Pennsylvania Coal Company, .....	George B. Smith, .....	Dunmore, Pa.

PA Mine Inspection 1899

I wish to call your attention to **Bunker Hill** breaker; while the breaker itself is situated in the Second anthracite district, the coal is prepared and accounted for in the Third or McDonald's district. The breaker for the present is used only to screen coal that has already been prepared in excess of the market's demands, the same coal having already been prepared at the several breakers near the mines and shipped to the company's dumping grounds near this breaker.

Yours very respectfully,

JAMES YOUNG,  
*Mine Superintendent.*

*Dolph Tunnel.*—Inside slope or dip being driven to crop at south end of property, and operated by a pair of hoisting engines located on surface; rope through bore-hole. Opening being driven from crop, up to meet said slope. Electricity is used for signaling.

*Marshwood Slope and Tunnel.*—Additional traveling way made on eastern crop of vein for men and mules, thus avoiding the use of the air shaft by miners and laborers and the slope for mules. No. 3 drift in Upper Dunmore gangway and airway driven in 350'. No. 4 drift in Upper Dunmore gangway and airway driven in 125'. Pennsylvania slope, in new territory, acquired from Pennsylvania Coal Company, sunk 300'.

*Jones, Simpson & Co.*—Set new boilers at breaker.

*Pancoast Shaft.*—Continued tunneling vein towards old slope workings which were filled with water, when 80' from old workings, water was tapped from two headings with 2½" holes and is now being pumped out.

*Rushbrook Mines.*—Have graded and laid 1½ miles of track, 3' gauge, with 40 pounds railroad iron; built new boiler house 21'×55', engine house 27'×34', and fan house 14'×31', with tower 13'×16' and 36' high.

*Spencer's Shaft.*—Driving slope through strata from middle to bottom vein on an incline of 15' to 100' horizontal.

There were no improvements reported from any of the other collieries except what were necessary to provide for keeping the workings in such a condition as to provide for the quantity of coal required.