

RANDALL AND SHAAD COAL COMPANY

Colliery.—Ventilation bad. Roads and drainage good. Condition as to safety good.

O'Boyle and Foy Mining Company have erected a new breaker and sunk and opened up two shafts, one for a hoisting shaft and the other for an air-shaft, or second opening. They have not shipped any coal so far but intend to operate early in the spring of 1906. This breaker will have a capacity of from 800 to 1,000 tons per day when in full operation.

IMPROVEMENTS

LEHIGH VALLEY COAL COMPANY

Exeter Colliery.—Completed installation of 20 foot Guibal, double intake fan driven by 18x20 inch Corliss engine. Brick house for same.

New wash house equipped with 100 lockers.

Three hundred H. P. B. and W. water tube boiler and brick house.

New inside barn in Marcey vein.

A series of surface test holes to determine safe rock cover working limit over Checker vein.

Bore holes and extension of silt lines in Checker vein.

The breaker has been equipped with new mechanical pickers.

New cage on second opening Red Ash.

Maltby Co'liery.—No. 9 Rock slope, 600 feet long completed.

Surface road 1,200 feet long completed between shaft and No. 9 tunnel.

New brick stable for 60 mules, concrete harness house and mule hospital.

Three permanent concrete over casts are being constructed in Marcey vein.

New Duplex 30x10x36 pump placed at foot of shaft and 10 inch column pipe up shaft to surface.

A centrifugal pumping plant is under construction, including 175 K. W. 500 volt generator with engine for same.

One 12 inch bore hole for pump discharge.

Five thousand feet length of wiring from generator to pump.

New pump house at foot of Marcey vein haulage way.

Extensive repairs continued to breaker.

New shakers installed, also additional pickers.

Bore hole and pipe line for silting in Six Foot and Marcey veins.

Westmoreland Colliery.—This colliery was purchased from the Wyoming Coal and Land Company and came into possession of the Lehigh Valley Coal Company March 1. Immediately after its purchase an exchange was entered into between the Lehigh Valley Coal Company and the Pennsylvania Coal Company for the Monument farm tract, and slopes are being sunk through the barrier pillars in the Marcey and Pittston Veins.

A series of test holes has been and will be continued to prove the safe working rock cover over the Pittston vein.

A rock slope 300 feet long has been sunk from the Marcey to the Ross vein.

Two tunnels have been driven in water level from Ross to top split of Red Ash.

Two tunnels from top to bottom Ross.

New brick boiler house has been constructed.

One 250 H. P. Root boiler installed, and 300 H. P. Stirling boilers now under construction.

A system of fire protection, water lines, fire hydrants, etc., has been installed.

The fan has been entirely rebuilt.

A new second opening is under construction from the Pittston vein to the surface.

A new central pumping station is being pushed to completion in the Marcey vein.

Steam lines have been taken out of slopes and are now run down new 10 inch bore hole.

A 14 inch column pipe is being constructed.

Six inch silt hole completed from surface to the Marcey vein.

Williams crusher being installed.

A new Duplex pump has been placed in the Marcey vein.

The old flue boilers and cylinder boilers have been dispensed with.

New warehouse built.

New brick boiler fan, feed and fire pump house completed.

Pittston vein is being regraded and enlarged.

Drainage bore hole completed from Pittston to Marcey vein.

Seneca Colliery.—Six new jigs were installed in breaker.

The new shaft to the Pittston vein was completed, and a second opening was also driven.

The Phoenix is now ventilated from the Twin and Coxey, as the fan for that purpose has been removed to the Pittston vein shaft.

TEMPLE IRON COMPANY

Mt. Lookout Colliery.—The main shaft has been sunk from the Marcey vein to the Red Ash vein, a distance of 180 feet. A connection has been driven between the main and supply shafts in the Red Ash vein, and the gangways continued in a southerly course from the main shaft, a distance of 600 feet.

A rock slope was driven from the Marcey vein to the Red Ash vein on 19 degree dip, 560 feet in length. This slope cut the Red Ash vein about 1,000 feet southerly from main shaft. Gangways were turned on course to meet gangways driven from main shaft, and have 200 feet of drive to make connection. Two new $7\frac{1}{2}$ ton electric locomotives have been installed in Marcey vein and are giving good satisfaction.

The main fan house, containing two 8x20 foot fans, was burned on June 5. The fire is supposed to have started from a hot journal. One fan was repaired sufficiently to enable men to resume work after two days idleness; the other fan was repaired and enclosed by a concrete building. The engine house, fan casing, division wall, air ducts and spiral are entirely made of concrete, making an absolutely fire-proof building. On account of the effect of cold weather on concrete during construction they have decided to defer the erection of the other fan house until spring.

A pair of 20x33 inch hoisting engines were erected on the supply shaft in place of a pair of 14x16 inch engines, which were inadequate

New fuel conveyor lines have been installed between the washery and the boiler house.

The conveyor between the breaker and the washery entirely rebuilt. Condition of colliery is good.

Westmoreland Colliery.—Series of test holes have been continued to prove the safe working rock cover over the Pittston vein.

Finished the installation of 300 H. P. Stirling boilers.

Enclosed the concrete house with corrugated iron roofing.

A new duplex pump 26x10x36, has been installed in the Marcy vein, discharging through a 10 inch column bore hole to the surface.

Steam and exhaust bore holes were completed from surface to the centrifugal pump station.

Drainage bore holes completed from Pittston to Marcy vein.

A new rope hole from surface to Pittston vein No. 1 inside slope with hoist engine on the surface.

The No. 1 Pittston vein inside slope has been extended 2,000 feet.

Number 5 Slope inside Pittston vein extended 800 feet.

Number 3 Marcy vein slope extended 1,200 feet.

Number 4 Slope Marcy vein extended 1,200 feet.

New mechanical pickers installed in breaker.

Rope hole is under construction from surface to Marcy vein.

Engines to be placed on the surface and removed from inside.

Considerable attention has been given to regrading the slopes and laying them with 40 pound rails.

New batteries and ventilating walls constructed, and roads given thorough attention to bring the colliery up to an efficient standard.

A new rope haulage engine installed on surface between foot of breaker plane and inside slope. The condition of the colliery is fair.

Maltby Colliery.—Three permanent concrete overcasts finished in Marcy vein.

Finished the installation of new centrifugal pump plant 175 K. W. with 500 volt generator with engine for same.

New bore hole and pipe line for silting in 6 foot and Marcy veins, location of bore hole being at foot of breaker.

Silting has been extensively carried on at this colliery during the past year in the Marcy vein.

A new head frame is under construction for the No. 2 Main Hoist shaft.

New conical drums were placed on hoisting engine.

Concrete lamp house for inside foreman's office.

A series of diamond drill holes were bored through the pillar in the No. 2 shaft to test the level of the standing water in the old Maltby 6 foot vein, with a view of tapping the standing water and bringing all the water to the central pump station at the foot of the No. 2 shaft.

The storm of October 27 did considerable damage at this colliery, blowing down all the stacks, the boiler fuel conveyor and a large portion of the steam lines. Repairs, however, were quickly made, and little time was lost in the operation of the mine. The condition of the colliery is good.

CLEAR SPRING COAL COMPANY

There were no particular improvements made at this colliery during the year. The general condition of the colliery is good.

IMPROVEMENTS

LEHIGH VALLEY COAL COMPANY

Maltby Colliery—Outside.—A new 8-inch silt bore hole from the surface to the Marcy vein was completed. The old 8-inch silt bore hole was reopened and recased. Considerable repairs and changes were made to breaker. The Rock plane was considerably improved and extended.

Maltby—Inside.—The work of reopening and cleaning the main intake and return air course in the Marcy vein was completed. Electric haulage has been installed in No. 4 lift in the Marcy vein, and also at the head of No. 6 plane in the Six Foot vein. A new slope has been started to the east off main tail rope slope. Preparations are under way for a new rock slope from the Six Foot to the Marcy vein in the River district. Diamond drill driving, to locate old plane and flooded districts, was continued.

Westmoreland Colliery—Outside.—Extensive repairs to breaker. A new breaker with a self-acting Barney equipment completed. A new breaker plane hoisting engine was completed. An 8-inch silt bore hole from the surface to the Six Foot vein was reopened and recased. A series of test holes to prove rock cover in the Pittston vein were driven.

Westmoreland—Inside.—In the Six Foot vein a Y slope on the south side of the Mt. Lookout anticlinal was completed and equipped with an electric hoist. Electric haulage was extended between the foot of No. 1 slope and No. 2 plane. A new electric pump was installed in New Slope district, in the Six Foot vein. A rock manway was driven through the fault near the foot of No. 1 slope; also a rock manway from the Marcy to the Pittston vein on the tunnel level was completed. A 4-inch drainage bore hole from the Pittston to the Marcy vein was completed. In the Marcy vein a new electric pump was installed in No. 3 slope district, and a 11 degree rock plane started from the Marcy to the Pittston. Electric haulage was extended to No. 2 slope district. A concrete-steel overcast was completed in No. 3 slope district.

Exeter Colliery—Outside.—Extensive repairs were made to breaker. A concrete foundation and installation of new jigs in the washery were completed. The conveyor trestling between the breaker and the washery was entirely rebuilt. High pressure air compressor at the Red Ash shaft was removed to the new compressor house east of the boiler plant. A concrete air conduit for the new Blower system for the boilers was constructed. An 8-inch bore hole from the surface to the Checker vein for the breaker refuse silt, was completed, and preparations for the installation of a Jeffrey's crusher were made. The electric light system on the surface and in the mines was extended. Considerable changes to locomotive tracks were made.

The slant slope mentioned in the last report was extended. A concrete dam was built for turbine sump. A Jeanesville pump was installed at the foot of shaft to replace the old Griscom pump removed. Steel timbers put in on east and west side of the shaft, and steel girders at the foot of the same.

Arched roof consisting of high-rib and concrete put in to support roof between steel timbers. New concrete office for fire bosses and electricians completed near the foot of shaft in Marcy vein. General repairs made in the barn.

Westmoreland Colliery.—Outside: Extensive repairs made to breaker, consisting of new pockets and chutes and steam heating system. Six L. V. jigs were installed. Test holes to prove rock cover from Pittston vein progressing on last report were continued in the territory between Wyoming Avenue and the river and the work is now completed. Fire alarm system installed.

Inside: One small electric triplex pump installed in Marcy vein, No. 3 slope. No. 3 slope, Marcy vein, extended to Mt. Lookout anticlinal. Two diamond drill holes put down Pittston vein to prove Marcy vein south of Mt. Lookout anticlinal, and plans completed for driving tunnel through said anticlinal. 280 feet of grading, 180 feet of tunnel, and 320 feet of plane on 11 degrees completed from Marcy to Pittston vein, for dropping the latter coal to the Marcy vein. New road was driven through the old workings in the Pittston vein to mine virgin coal in northeast corner of property. Main haulage road in Pittston vein south of Mt. Lookout anticlinal graded for motor. Electric haulage system was extended. Inside bore holes put down from Marcy to Red Ash to prove veins.

Exeter Colliery.—Outside: Series of test holes were put down to prove Checker vein on the east end of the property beyond the fault. Concrete side-walk was laid in Exeter borough along the west side of Wyoming Avenue and drainage connections made with the Exeter borough sewer. New cage was put in Knight shaft. Old engines were replaced with 12 by 12 Clark and fan hoist repaired. An additional locomotive was installed. Fire alarm system installed. Extensive repairs were made in the breaker. Changes were made in the washery and two L. V. jigs added for egg coal. Building formerly used for compressor house equipped for housing locomotives.

Inside: A new concrete pump room mentioned in the last report, constructed in the Pittston vein and a 24 by 39 by 16 by 48 Goyne pump installed. The Marcy vein barn was enlarged. Old timber stalls are gradually being replaced with concrete, fourteen of which have been completed. 10 by 12 Flory engine placed in Checker vein and roads laid to develop northwest section. No. 8 slope, Marcy vein, extended. No. 4 plane workings in Top Red Ash vein connected with Nos. 5 and 6 plane workings. Work was commenced on the installation of a balance plane in Bottom Red Ash vein. A $7\frac{1}{2}$ ton air locomotive added to present equipment in Red Ash vein. Work commenced in Marcy vein for installation of an air motor for haulage mentioned in last report was continued and is nearly completed.

William A. Colliery.—A new balance plane, 900 feet long, was laid outside at Campbell's Ledge, and a drift driven into the Marcy vein.

Maltby Colliery.—Inside: No. 7 slant slope was extended in the Marcy vein. A 30-degree rock plane, 206 feet long, was driven from the Eleven Foot to the Six Foot, as a second opening to the No. 8 slope, mentioned in last year's report. No. 9 slope in the Marcy vein was extended and graded. No. 10 slope was driven in the Six Foot. No. 11 slope in the Marcy vein was started. Three small single drum electric hoists were installed, also two 8-inch by 9-inch electric triplex pumps. Plans were completed for a 30-degree rock plane from the Ross vein to the Nine Foot vein, No. 6 slope. A new balance plane was installed in the Six Foot vein, river district, which released one motor taken to the Eleven Foot. The reopening of roads in the Eleven-Foot, Six-Foot and Four-Foot veins was started to rob pillars northwest of the shaft. A 4-inch bore hole was drilled from surface to the old plane, which broke into the sand years ago, and cement was pumped through this hole in the hope of sealing off this plane. It is intended to carry on this work by drilling more holes to fill, if possible, the old plane with cement. New roads were driven in the Marcy vein and the electric haulage extended so as to concentrate the coal east of the slope to one lift. The mule barn in the Marcy vein is being reconstructed of concrete to make it fireproof.

Outside: Drilling operations were carried on in the river district to prove the Four-Foot vein rock cover. New engines were installed on the head of the outside refuse plane to handle breaker refuse and hoist coal from the Four-Foot slope. Extensive repairs were made in the breaker and new rolls were put in. The colliery fence was extended. Feed water regulators were installed at the boiler plant. One Welch overwinding device was installed in the shaft engine house.

William A. Colliery.—Inside: The following planes have been driven and put in operation: One 500 feet long in the Clark vein; one 800 feet long in the Marcy vein; and one 1,800 feet long in the Fifth vein. These planes are operated by engines located on the surface.

Outside: A conveyer 270 feet long, was built to handle ashes from boiler house. A new boiler house was erected at Campbells Ledge, containing two 72-inch by 18-foot boilers, to provide steam for engines on Marcy, Clark and Red Ash Planes. Two engines (one 13 by 18 inches and one 14 by 18 inches), were installed, and two rope holes put down, one to Marcy vein and another to Clark vein. A 14 by 18-inch two-drum engine was installed and rope hole put down to Red Ash vein.

Westmoreland Colliery.—Inside: The main haulage road in the Pittston vein, south of the Mt. Lookout anticlinal was extended. No. 7 tunnel, 250 feet long, was driven through the fault in the Marcy vein to mine the coal south of the Mt. Lookout anticlinal. In addition to this 220 feet of bottom rock was blown on the motor road outside of this tunnel. No. 4 rock plane, 63 feet long, was also driven through the fault as a second opening to the tunnel mentioned above. The foot of the main slope in the Marcy vein was graded to facilitate the handling of loaded and empty cars. Work was also commenced to reopen the old gangways at the head of Six-Foot slope to rob pillars east and west of the slope. One new 7-inch by 9-inch triplex electric pump was installed in the Six-Foot vein. The main tunnel was ex-

tended 27 feet and the head of the Marcy slope graded, in connection with the work of concentrating the hoisting of all the coal up the Marcy slope.

Outside: A 10-inch silt hole lined with terra cotta pipe was put down from surface to the Marcy vein, this hole to serve in case of emergency. A pair of 28-inch by 48-inch first motion engines was installed on the surface the rope operating through a new 8-inch bore hole put down on the mountain side from the surface to the head of the Marcy slope. These engines are housed in a new building of tile construction and steam is carried to these engines from the boiler house through a new 8-inch steam line 550 feet long. Test holes were put down on the Reynolds property to prove the Six-Foot vein rock cover. Extensive repairs were made to the breaker and the pockets were renewed. A new office building, containing rooms for outside foremen, colliery clerks and shipper, and with warehouse and oilhouse attached, all of tile construction, was erected and the old frame office building dismantled. 500 feet concrete retaining wall put up, 200 feet of same being along loaded track leading to the breaker plane, and the balance 50 feet and 250 feet on the west and east side of breaker respectively. A new concrete fanhouse with new engine and 20-foot fan was installed to replace the fan of wooden construction. 375 feet of 18-inch terra cotta pipe laid to carry the water from the Marcy pump discharge hole to the creek. A new 18-inch by 36-inch breaker engine was installed.

Stevens Colliery.—Inside: Rock cut was made for handling coal from Marcy vein to shaft. Motor road was completed in upper lift of Marcy vein and now handles coal directly to the shaft, which was previously done by a slope. Top Marcy vein gangways are being driven ahead rapidly and chambers worked from them.

KINGSTON COAL COMPANY

Kingston No. 4 Colliery.—Inside: Two tunnels have been driven in Orchard vein through roll and Lance vein to Orchard vein, a distance of 1,500 feet. Three new overcasts have been built in the Orchard vein of steel and concrete. Two new concrete barns have been built, one at Orchard vein and one at Cooper vein, complete with baths. One Scranton 14 by 8 by 18-inch steam pump has been installed for ash water purposes.

In No. 4 shaft, a new condensing house and Scranton duplex condensing pump, 14 by 8 by 18 inches have been added to No. 4 shaft pump house, and pump house has been rebuilt with steel and concrete timbers. A new quintuplex pump, a duplicate of the one installed in 1910, has been erected at the foot of Red Ash slope, and pump room completed of steel and concrete. 300 feet of the main slope above pump house has been timbered with steel timbers and concrete retaining walls. Two new overcasts have been built of concrete and steel in the Ross vein. New concrete barn consisting of fifty stalls have been built in the Red Ash vein, complete with mule baths. A rock slope 250 feet long has been driven through the roll in the Ross vein. Silting has been carried on very extensively in the southern and middle districts of the Ross and Red Ash veins during the year. Nos. 1 and 4 shaft hoisting engines have been equipped with the Welch improved overwinding device, steam reverse and brake.

consisting of one 18 by 30 inch McEwen engine and generator, capacity 700 amperes at 250 volts. The wooden tower over Coxey shaft was replaced with a steel tower and the hoisting engines were changed. A Welch overwinding device was put on the hoisting engines at the Twin shaft. Completed the 17-inch bore hole through which the pump in the Marcy vein, No. 5 slope, delivers water to the surface.

Westmoreland Colliery.—Inside: A 6-ton electric motor was installed in Marcy vein.

Outside: Built a concrete arch at the mouth of No. 1 tunnel; also a wash house of tile construction, equipped with shower baths and lockers.

KINGSTON COAL COMPANY

Kingston No. 4 Colliery.—No. 1 Shaft, Inside: Tunnel 200 feet long was driven from Cooper vein to Orchard vein, No. 1 slope. Tunnel 500 feet long was driven from Lance vein to Orchard vein, No. 3 slope. Two tunnels, each 75 feet long, were driven from Lance vein to Cooper rock plane. A tunnel was driven from Checker vein pump room, No. 1 shaft, to connect with No. 4 shaft. Connection was made from No. 6 slope to No. 3 slope in Bennett vein. No. 3 slope is now being used as a traveling way. A new manway was constructed along No. 3 Orchard slope. A new main airway completed from the lower dip workings in No. 1 shaft to No. 6 fan. A new silt line 4,800 feet long was laid from Orchard vein, through Lance and Cooper veins, into the lower level workings in the center of the property.

No. 4 Shaft. Inside: New concrete retaining walls were built between the foot of the shaft and the pump room. Two 4-inch bore holes were drilled from Ross vein to Red Ash vein for silting purposes and one 2-inch hole from Bennett vein to Checker vein for drainage purposes. Silting was carried on extensively during the year in Ross and Red Ash veins.

Outside: A new 8-inch steam line was erected from No. 4 boiler house to No. 2 bore hole fans. Engines and boiler plant at the latter place were dispensed with. Railroad yard facilities were increased for shipping coal over the Lehigh Valley Railroad. Three new air receivers were installed at compressor plant. Erected a 25,000 gallon water tank opposite the boiler house for No. 4 washery.

FORTY FORT COAL COMPANY

Forty Fort Colliery.—Inside: An 8 by 12-inch duplex double-acting pump, driven by a 75-horse power motor, operated by alternating current at 440 volts, was installed in Six Foot vein near the head of Six Foot slope, to pump water from that point to the surface and an 8 by 12-inch triplex, single-acting pump, operated by a 20-horse-power electric motor, was installed in South slope, Six Foot vein, to pump water from the slope to the pumping station near the head of the slope, and 1,500 feet of 6-inch wrought iron column pipe laid between these two pumps. A 22-horse power electric hoist was installed in Four Foot vein, South slope section, and electric hoist was installed to operate the South slope. The object in installing

Maltby Colliery.—Inside: A rock tunnel 130 feet long was driven from the Bottom Ross vein to the Red Ash vein in No. 5 slope workings. A 300 gallon triplex electric plunger pump was installed in No. 8 slope in a concrete pump room. Silting was commenced in the Six Foot vein.

Outside: Installed 9 Lehigh Valley four-foot jigs and rebuilt pockets in east side of breaker. Drilled a 12-inch bore hole to Marcy vein for silting purposes. Erected fireproof hospital, saw house and scale house. No. 2 fan shaft was concreted and No. 1 fan house made fireproof.

Seneca Colliery.—Inside: Installed one 500-gallon triplex electric pump in Clark vein, one 16½ by 26 by 36 inch Duplex Jeanesville pump in No. 5 slope, Marcy vein, and a simple pump in the same pump room was compounded. Both pumps are equipped with condensers. Drilled a 17-inch bore hole from surface to Marcy vein. 160 diamond drill test holes were put down to ascertain the rock cover over the Pittston, Marcy and Red Ash veins.

Outside: Built hospital and locomotive house of brick and tile west of breaker.

William A. Colliery.—Inside: Built a medical room of concrete at No. 10 tunnel and completed an additional air shaft from surface to Marcy vein at this opening.

Outside: Built head frame over the tender shaft, and placed new cribbing in Babylon air shaft. Foreman's office was converted into a hospital. A new office is being constructed. Built tile and concrete locomotive house at No. 10 tunnel.

Westmoreland Colliery.—Inside: Installed a 150-gallon horizontal triplex electric pump in the Pittston vein.

Outside: Built hospital of hollow tile. Made roof of boiler house fireproof. Two diamond drill holes were put down to the Pittston vein from the surface and extensive repairs were made to the breaker.

KINGSTON COAL COMPANY

Kingston No. 4 Colliery.—Outside: Installed a double intake 8 by 25 foot ventilating fan at No. 4 shaft, driven by 18 by 30 inch direct connected Corliss engine. The fan house and approach to the shaft are made of concrete and steel. The Bennett and Orchard fan engines at No. 2 bore hole were equipped with new 18 by 20 inch Corliss valve engines. Completed 12-inch concrete steel partition in the airway compartment of No. 4 shaft, from the Red Ash to the Bennett vein, and the old brattice in that section was removed. Drilled an eight-inch bore hole from surface to Bennett vein, 330 feet, for pumping purposes. No. 4 breaker engine was replaced by a cross compound Lentz engine, 19½ inch high pressure and 32½ inch low pressure cylinders and a 21 inch stroke. This engine is of the poppet valve type. No elastic or metallic packing is used; the valve stems are kept steam tight by means of the labyrinth system of water seal packing. Made two additions 22 by 68 feet to the wash house, which is now equipped with 6 shower baths, 12 wash stands, 36 concrete wash tubs and 435 lockers. Constructed a new warehouse 30 by 80 feet, with brick walls and concrete floor and roof. Completed fireproof building 30 by 68 feet for electrical department. Concrete fuel bins and a new concrete ash pit were made in the boiler room. The old warehouse has been remodeled so as to allow

fire protection was installed in the breaker and washery. Repairs to boiler plant were completed. Red Ash shaft engine house was rebuilt with brick and made fireproof. Tile hose house and scale office were erected. Colliery yard was regraded.

Maltby Colliery.—The pumping plant at this colliery has been abandoned. The water in the Marcy vein is carried in pipes to the lower elevation and forced up through an 8-inch bore hole to the Six Foot vein. It then flows to bore holes which were put through the barrier pillar to the workings of the Henry colliery, where it is pumped to the surface. A slope is being sunk in the abandoned Six Foot workings, Fuller shaft. Until recently these workings were under water. A Morgan-Gardner undercutting machine was installed in the Top Red Ash split. A spray system was installed in the breaker for fire protection. A concrete reservoir having a capacity of 50,000 gallons, together with a pumping plant, was installed near the breaker, to furnish water for the fire system. A steam shovel is at work picking up the culm bank at the Fuller colliery. A plane was constructed at the breaker and a locomotive track constructed for the purpose of transporting the culm to the breaker.

Seneca Colliery.—Two tunnels were driven from the bottom split of the Marcy vein to the top split. Two 7½-ton Jeffery electric motors were installed in the Clarke vein. One 6-inch bore hole was drilled through the barrier pillar to the workings of the Stevens Colliery in the Marcy vein. A Jeanesville pump was installed and a fireproof pumphouse erected at the Twin shaft to supply the breaker with water. A Pennsylvania crusher was installed at the breaker to crush the refuse for silting in the Marcy vein. Safety automatic gates were installed at Twin shaft. Colliery yard was regraded.

William A. Colliery.—Electric haulage was installed from No. 10 tunnel to Evan's Farm section and the system was rebuilt to William A. shaft. This will allow all coal to be transported underground instead of dumping part of the output into railroad cars for shipment to the breaker for preparation. A new concrete engine house was constructed inside and a bore hole put down for exhaust steam to handle the coal on the Lawrence plane. A tile washhouse and foreman's office was built at No. 10 tunnel. Steel lockers for 32 men have been provided. A substation for electric power has been established at Babylon shaft. A spray system for fire protection has been installed at the breaker. Automatic safety gates were installed at William A. shaft.

Westmoreland Colliery.—A new second opening was driven from the Pittston vein to the surface. The plant for generating electricity and a new substation built. Power is now purchased from Luzerne County Gas and Electric Company. The feed wire system was also rebuilt. A new tile shop building is under construction. A spray system for fire protection was also installed.

Stevens Colliery.—Two 6-inch bore holes were drilled through the barrier pillar in the Pittston vein and two in the Red Ash vein. These bore holes were 250 feet long, and will be used for the purpose of draining Stevens colliery and abandoning the pumping plant. Steam blowers were dispensed with at the boilers and a blast fan installed. Old boiler plant was dismantled. Work was commenced to reopen the Pittston and Checker veins for pillars. Refuse banks are being silted into the mines through a new 10-inch bore hole. A rock crusher is used to crush the material.

CONDITION OF COLLIERIES

LEHIGH VALLEY COAL COMPANY

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

Exeter, Westmoreland and Maltby Collieries.—Ventilation, drainage and condition as to safety, good.

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

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

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

William A. Colliery.—Ventilation fair. Drainage good. Condition as to safety, fair. The breaker burned January 2.

TEMPLE COAL COMPANY

Forty Fort and Harry E. Collieries.—Ventilation, drainage and condition as to safety, good.

KINGSTON COAL COMPANY

Kingston No. 4 Colliery.—Ventilation, drainage and condition as to safety, good.

MOUNT LOOKOUT COAL COMPANY

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

HEALEY COAL COMPANY

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

WHITE COAL COMPANY

White Colliery.—Abandoned April 30.

IMPROVEMENTS

LEHIGH VALLEY COAL COMPANY

Stevens Colliery.—Removed the 20-foot ventilating fan from the hoisting shaft to mouth of rock slope. Installed one 10 by 12-inch Finch engine on the No. 11 slope in Fifth vein.

Exeter Colliery.—Installed four 5½-ton electric battery locomotives in Red Ash vein; also an additional 300-hp. boiler, and Edison portable electric lamps for use in breaker. Extensive repairs were made to the breaker, and 6 new jigs were installed therein.

Westmoreland Colliery.—Erected a new fuel conveyor from the breaker to the boiler house, and installed an Edison portable electric lamp for use in breaker.